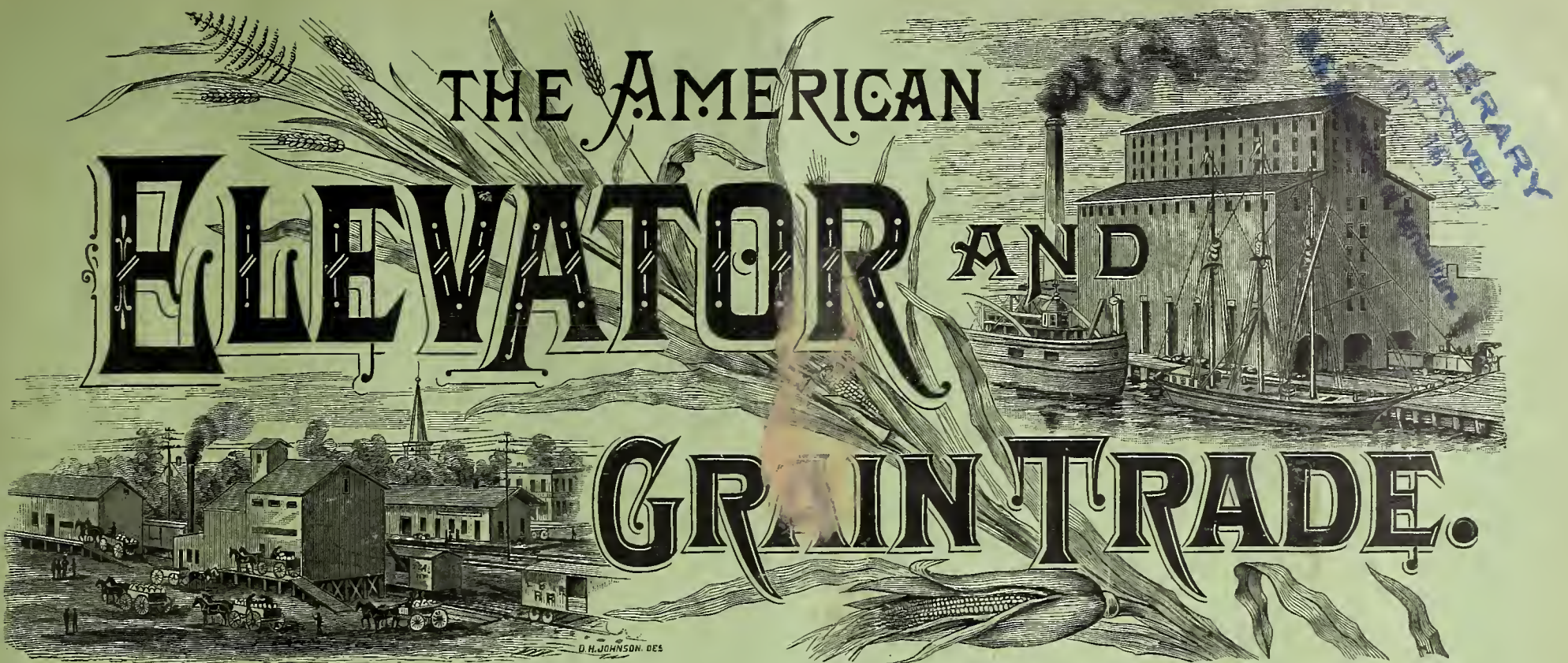


Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.



Entered as second-class matter June 26, 1886, at the Post Office at Chicago, Illinois, under Act of March 3rd, 1879.

A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

PUBLISHED BY
Mitchell Brothers Publishing Co.

Vol. XXXI.

CHICAGO, ILLINOIS, DECEMBER 15, 1912.

No. 6.

One Dollar Per Annum.
SINGLE COPIES, TEN CENTS.

IF THE PLIES

of your belt separate like
this it wasn't



"R. F. & C." Solid Woven Rubber Belt

The "R. F. & C." gives MAXIMUM of strength and
MINIMUM of stretch. Eliminates all belt troubles.

A sample will prove most convincing evidence;
send for it.

W. H. SALISBURY & CO., Inc.

Pioneer Rubber Belt Manufacturers in the West
CHICAGO, ILLINOIS

Let us BUY your grain if you wish to SELL
Let us SELL your grain if you wish to CONSIGN

J. C. Shaffer & Company

234 S. La Salle Street, CHICAGO

COMMISSION MERCHANTS

Also

Buyers and Shippers of Grain

W. M. HIRSCHY, Manager Commission Department

Consign your Grain and Field Seeds to

Somers, Jones & Co.

82 Board of Trade, CHICAGO



**MINNEAPOLIS SEED
COMPANY**

SEEDS

Timothy Our Specialty

MINNEAPOLIS, - MINN.

TRADE MARK REGISTERED IN U. S. A.

The Climax Scoop Truck

Is a scoop on wheels carrying 2½ bushels of grain and 200 lbs of coal. With it
a boy can do more than five men with hand scoops.

Saves time and labor which are money.

Saves fretting and sweating and demurrage bills.

Saves its cost in wear of other scoops,

Be "up-to-date" and ORDER NOW.

Price \$10.00
At Factory.

**Detroit
Scoop-Truck Company**

2227 W. Jefferson Ave.

DETROIT, MICH.

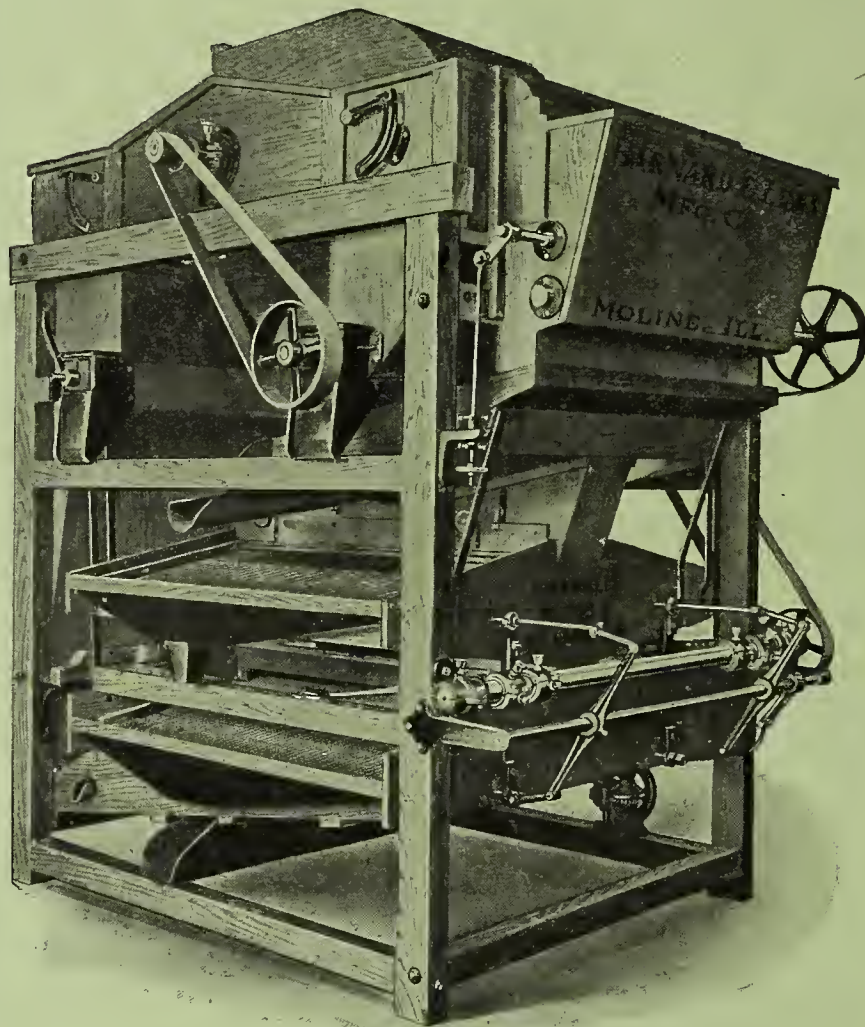




Good Results MAKE Satisfactory Profits

Barnard's Separators are satisfactory from every standpoint.

They have been on the market longer than any other line of separators, and during this time their many points of superiority have always kept them in the lead.



A
Satisfactory
Investment

The Result
of
Fifty Years'
Experience

Our latest machine is the result of our experience of over fifty years in building separators, and leaves nothing to desire in a grain cleaner.

Discard your old has-been and try one of these machines.



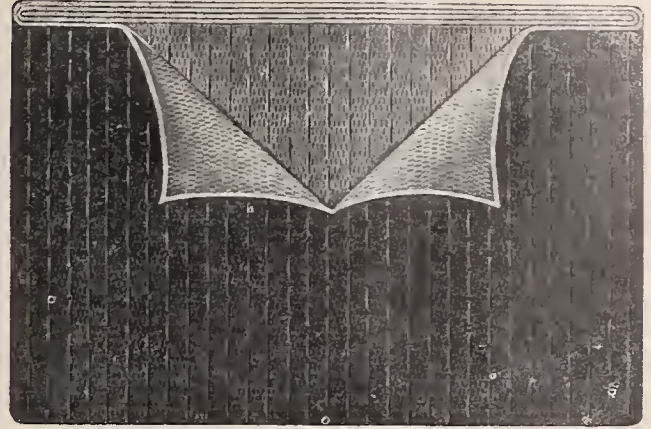
BARNARD & LEAS MFG. CO.

MILL BUILDERS AND
MILL FURNISHERS

ESTABLISHED 1860. MOLINE, ILLINOIS, U.S.A.

"ANTISULPHO"

**A Special Belt for
Grain BLEACHERY Service,
ELEVATING and CONVEYING**



Sulphur fumes have no effect whatever on ANTISULPHO BELTING—one installation has outlasted high grade rubber belting **THREE TIMES** and is still in service apparently as **GOOD AS NEW**.

If you operate a BLEACHERY and need a belt,
ANTISULPHO will **SAVE YOU MONEY**.

"ANTISULPHO" is of the same general construction as **REXALL DOUBLE STITCHED BELTING**, our Standard Grain Belt for **ELEVATING and CONVEYING**.

Scientifically built. No rubber to deteriorate.
Will outlast the best rubber belt **TWO TO ONE** and **COSTS LESS**.

IMPERIAL BELTING COMPANY

Manufacturers

CHICAGO

LIVE WIRES



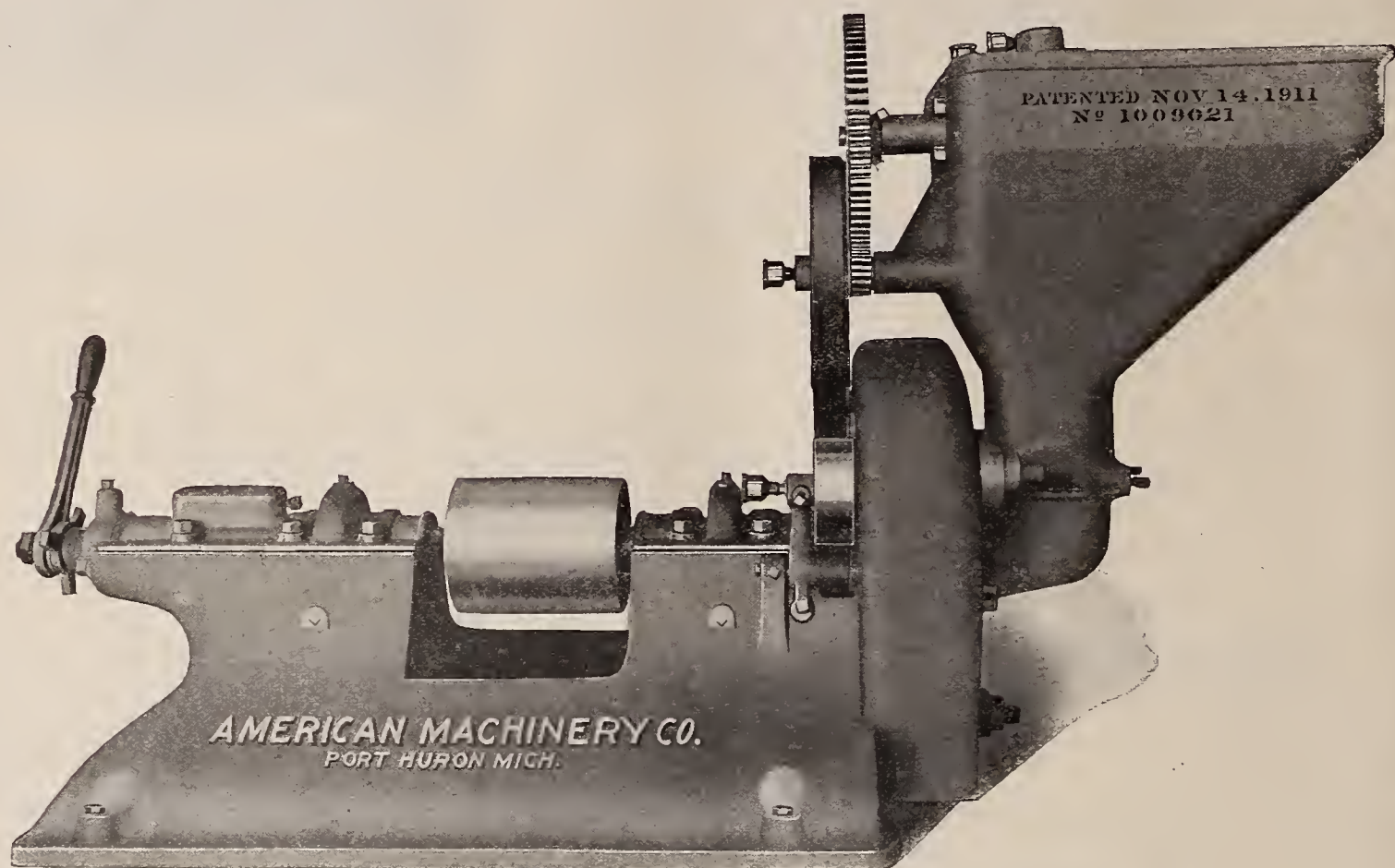
Live representatives at every dot on this map to post you through live telephone wires on "Up to the minute" conditions in the terminal markets. Live telegraph wires to transmit your orders regarding grain to-arrive, in-transit, or on the sample tables today. "Live wire" salesmen on the Exchange floor to give personal attention to your interests. It costs us more than the old style service, but it costs you no more.

LAMSON BROS. & CO.

Grain Commission Merchants

Home Office: 6 Board of Trade, Chicago

Doesn't This Look Good to You?



Base---Bearings---Case, All Cast Solid In One Piece.

Force Feed—Machine is equipped with vertical Conveyor Force Feeder that will feed evenly crushed ear corn, or any foreign material that may be in the grain.

Shaft—The Shaft is 50 point carbon steel, hot hammered, accurately ground, turned and planished.

Grinding Plates—The grinding Plates are entirely different than those used on Attrition Mills. They cut the grain the same as a roll, and the product ground is soft and bulky, which is appreciated by feeders of stock.

Power Required—The power required to operate our Mill is one-third to one-half that required to operate the so-called Attrition Mills.

Substantially Built—Our American Special is so strongly and substantially built that it will last a life-time.

Pressure—The greatest pressure on all grinding mills comes on the end of the shaft, and this is equipped with Ball Bearing.

Write for further description, and Net prices to

The American Machinery Company

Port Huron, Michigan

Machine=Molded Gears



We manufacture a very complete line of Gears 1-inch pitch and larger; they are noted for their strength, durability, true rims, accurate pitch and smooth running. Hence they are highly efficient and economical. If you use gears you should have our Catalog No. 34.

H. W. CALDWELL & SON CO., Western Avenue, 17th to 18th Sts., **Chicago**

NEW YORK, Fulton Bldg., Hudson Terminal, 50 Church Street.

THE INVINCIBLE-SYPHER Electro Automatic Magnetic Separator



Very Durable—Small Consumption of Current

Will positively remove all iron from the grain.

Has retaining force of 500 pounds, making it impossible for any iron to pass it.

This machine does not deteriorate with age—on the contrary actually becomes more efficient with use.

We are prepared to furnish a small inexpensive dynamo for it where current is not available.

INVINCIBLE GRAIN CLEANER COMPANY

SILVER CREEK, N. Y., U. S. A.

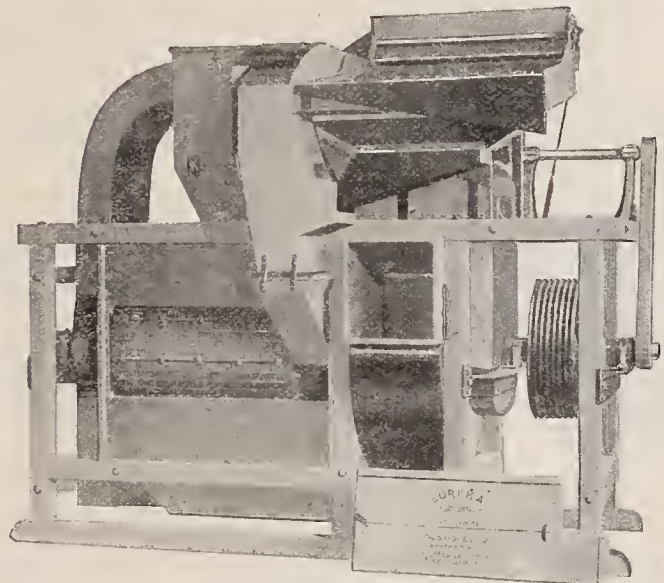
—REPRESENTED BY—

F. J. Murphy, 225 Exchange Bldg., Kansas City, Mo.
The Strong-Scott Mfg. Co., Minneapolis, Minn.
C. L. Hogle, 526 Board of Trade, Indianapolis, Ind.
Frank E. Kingsbury, Terminal Hotel, St. Louis, Mo.
J. J. Crofut & Co., 613 McKay Bldg., Portland, Ore.
Chas. H. Sterling, Jefferson House, Toledo, Ohio
C. Wilkinson, 6027 Chestnut St., Philadelphia, Pa.
F. H. Morley, 512 Traders Building, Chicago, Ill.
McKain Mfg. Co., Los Angeles, Cal.
Buckley Bros., Louisville, Ky.

If you handle

OATS

the "Eureka" is desirable, profitable and essential



A Modern Eureka Oat Clipper

HEAVY DUTY CONSTRUCTION

Our rigid policy is to build a strictly high class machine which will command the confidence of the best class of user—which we know will rapidly repay its purchase price and which should not be compared with light machines built for intermittent service.

CATALOG FREE

THE S. HOWES CO., SILVER CREEK, N.Y.

Elwood's Grain Tables

Show the value of any number of bushels or pounds of **WHEAT, RYE, OATS, CORN OR BARLEY** at any given price from 10 cents to \$2.00 per bushel. One of the most useful books ever offered to millers. Indorsed by prominent millers and grain dealers. Bound in cloth, 200 pages. Mailed on receipt of price.

\$1.25

Mitchell Brothers Publishing Co., 431 S. Dearborn St., Chicago, Ill.

Fumigation Methods

By W. G. JOHNSON

Contains full directions for Fumigating Mills and Elevators.

313 Pages. Price \$1.00.

Mitchell Brothers Publishing Co.

431 S. Dearborn St., Chicago

THE destructive acid formed by grain dust and rain water is successfully resisted by the inert pigments in

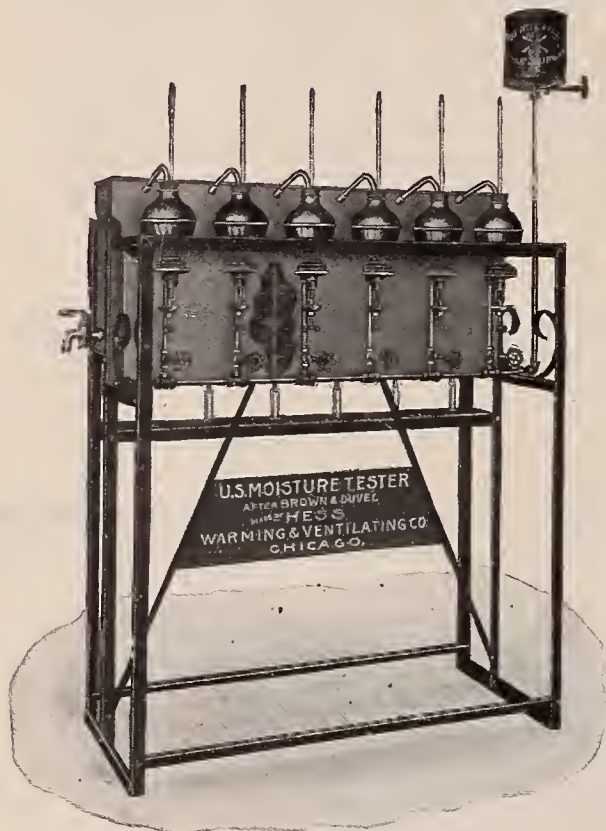
DIXON'S SILICA-GRAPHITE PAINT

Letter No. 17-B from a prominent elevator company on request.

JOSEPH DIXON CRUCIBLE CO.
Jersey City, N. J.

The Hess U. S. Moisture Tester

(After Brown & Duval)



There are more Hess Moisture Testers in use than all other makes combined
Why?

Because they are adapted for use with gasolene, which is the most available fuel for the country grain man, as well as with gas, electricity or alcohol, where these are preferred.

Because we use substantial copper flasks and tubes, instead of fragile glass bubbles which break and cause constant expense.

Because our tester is substantially built of heavy steel, on a strong steel stand of convenient height and not of flimsy sheet iron without a stand, as are other devices made for testing.

Because we guarantee our apparatus, our thermometers, our graduates and scales, to be **accurate**, subject to return at our expense if not satisfactory.

Because we keep a full supply of testers, scales and duplicate parts on hand **IN CHICAGO**, ready for instant shipment.

This is the year **YOU** need one. Ask for our free booklet, also about our **Grain Drier**.

HESS WARMING & VENTILATING CO., 910 Tacoma Bldg., Chicago



A Profitable Mill for Profit-Seeking Millers

There's money in the feed business.

But the only way you can get it — that is, get more of it than you've been getting, is to show the "other fellow's" customers that your brand of feed is of a better quality than his.

What people want now-a-days is **quality**. And it's a dead certainty they're going to deal with the man who gives them the most for their money.

You could wear a cheaper hat than you do. But you don't.

Why?

Simply because you prefer paying a dollar or so more and getting **quality**.

The same principle holds good in the feed business.

Most persons will gladly pay a little more for a good, clean-cut feed than pay ordinary prices for ordinary feed.

Therefore, put quality into your feed and —
Get More Business.

To produce high-grade feed you must own a high-grade mill.

Look where you may and as long as you will, you will never find a mill that is capable of grinding out feed possessing so high a degree of quality as the **Wolf Feed Mill** is capable of doing.

That's why so many millers and feed-mill owners who have installed this mill are enjoying such an increase in business.

The **Wolf Feed Mill** is built to produce clean-cut feed — not to squeeze, mash and tear the stock, but to **cut**.

You can greatly increase the demand for **your** brand of feed if you care to.

The secret lies in the installation of a **Wolf Feed Grinding Mill**.

If you want to know how this mill is built and why it produces so high a grade of feed —

Mail the Coupon. Mail it now.



When writing for particulars, please state whether you are interested in a two-pair high or a three-pair high mill.

THE WOLF COMPANY,
Chambersburg, Pa.

Gentlemen:—

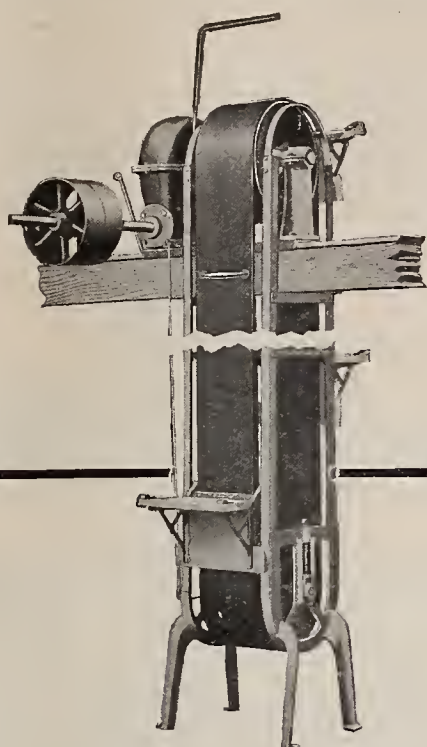
Please send me full particulars regarding the Wolf Grinding Mill. Two Pair High. Three Pair High.

Name

Street and No

Post Office..... State.....

THE WOLF COMPANY, Chambersburg, Pa.



A Reliable Service Elevator

is now regarded as a necessity in every well appointed mill, grain elevator and warehouse. In the N. & M. Co. service elevator, the mechanical construction, convenience of operation and general usefulness have been improved to a marked extent, resulting in a far more substantial and durable construction, saving in power, absolute dependability and greater safety to the users. Besides being a handy and practical passenger elevator, this time and energy saving device is frequently used for handling packages, material in bags, etc. It is built in heights to suit your conditions.

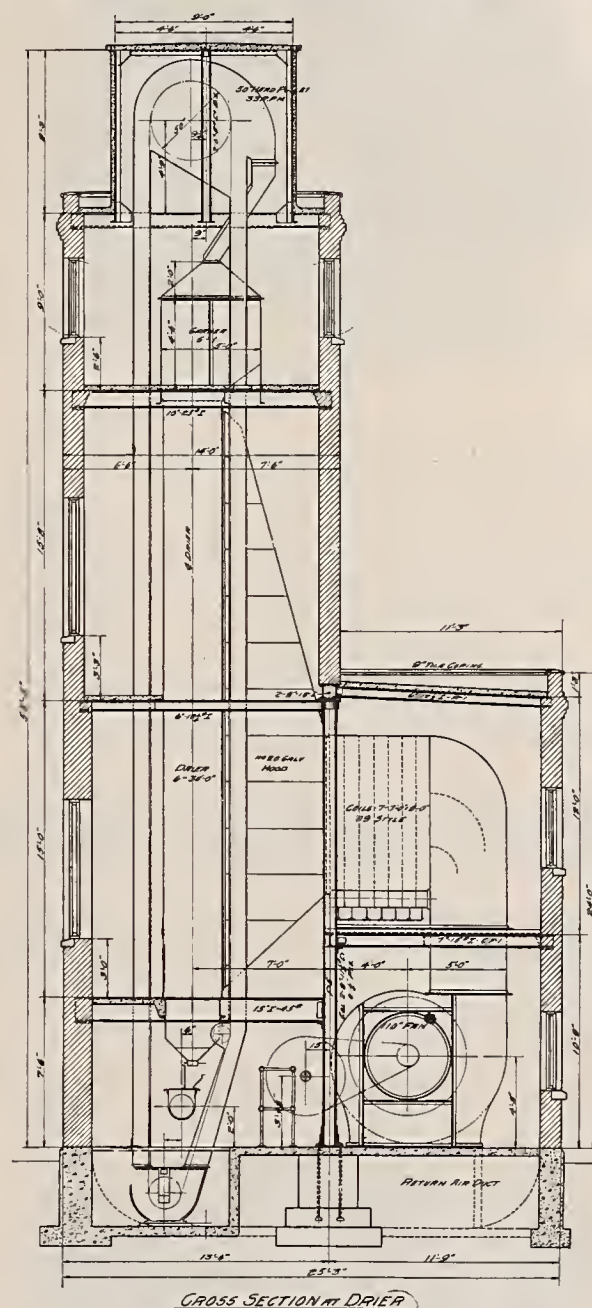
Our circular No. 1200 tells you about these service elevators. Write for it.

Nordyke & Marmon Co.

America's Leading Mill Builders

Indianapolis, Indiana

THE ELLIS DRIER CO.



Cross Section of Cleveland Grain Co.,
Drying Plant.

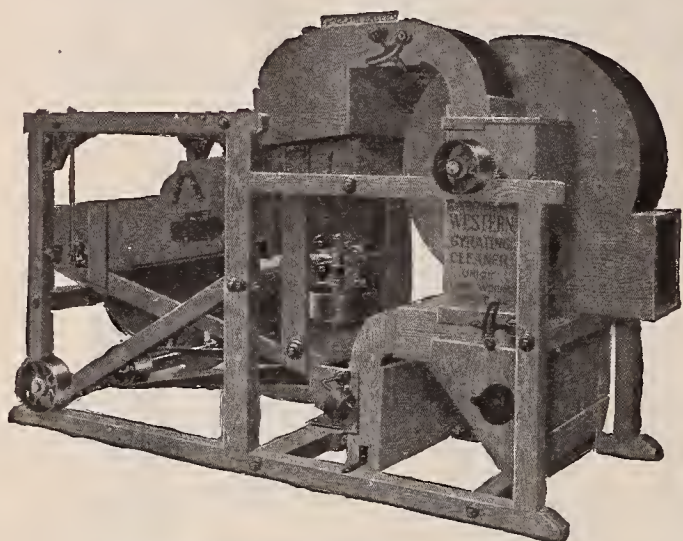
The section as shown above is that of the drying plant now in course of erection for the Cleveland Grain Co., Champaign, Ill. An exceptionally powerful independent cooler has been installed in this plant for the purpose of handling material from the drier when removing small percentages of moisture. This is the fourth plant erected for the Cleveland Grain Co.

Postal Telegraph Bldg.

CHICAGO, U. S. A.

WESTERN

machinery has played an important part in handling the world's Grain crop for nearly half a century.



The Western Gyrating Cleaner

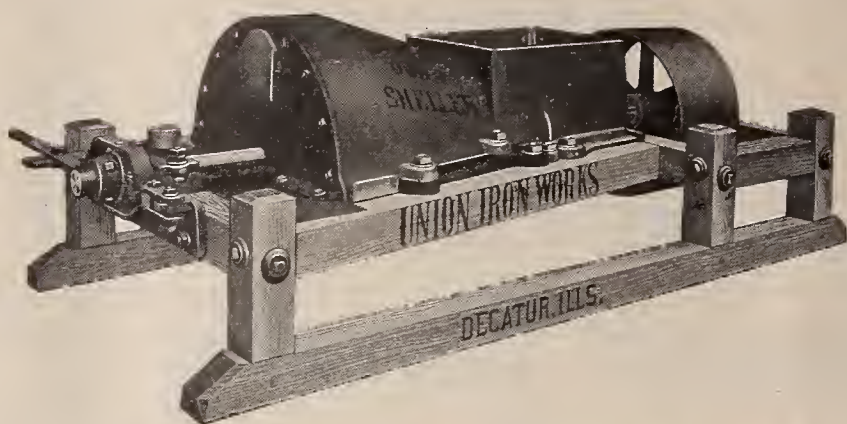
We manufacture everything needed for the grain elevator, from pit to cupola.

Write for Catalogue.

UNION IRON WORKS

Our SHELLERS and CLEANERS

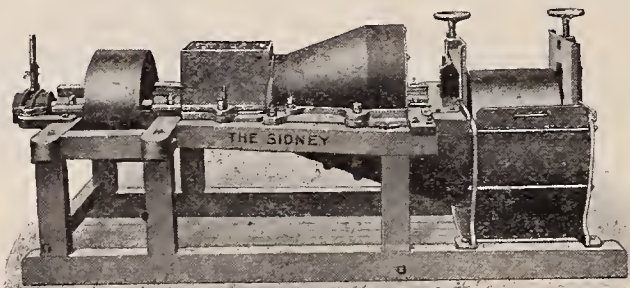
are the recognized standard wherever corn is grown.



The Western Regular Warehouse Sheller

DECATUR, ILLINOIS

Sidney Corn Sheller and Elevator Boot Combined



THIS MACHINE was designed by us for convenience of Grain Elevator Operators who wish to avoid pits and do not favor a Fan Sheller. This is a combination of our regular Sheller and Standard Cast Iron Elevator Boot which does not require expensive hopping under the Sheller to the Boot. No fan to blow dust up your elevator legs, the boot being attached to sheller frame and forming a part of the Sheller. Absolutely no danger of sheller choking as you have an even feed from sheller to boot and your elevator cups are always filled evenly, that is, the grain is carried across the boot and fills the cup as much on one side as on the other. No danger of grain flying into your boot pulley when discharging from sheller to boot, as this pulley is provided with a plate. You will not be troubled with soured grain as there is no chance for leakage of grain in passing from sheller to boot and there is no possible chance for rats to work into the boot.

The Boot is provided with take-up screws to adjust or tighten the belt, the pulley and shaft in boot are entirely independent of the sheller, the boot pulley being driven from the head pulley. The end plates in boot are removable and provided with hand holes in case of choke-up in elevator. Boot made to fit any size cup, each sheller taking such a varied size elevator that in most all cases this machine can be attached to your present stand of elevators.

Sheller provided with our patented adjustment so that the cylinder can be adjusted to the different conditions of the corn while in operation.

All shelling parts of shelling surface chilled, insuring durability; same applying to all "Sidney" Corn Shellers.

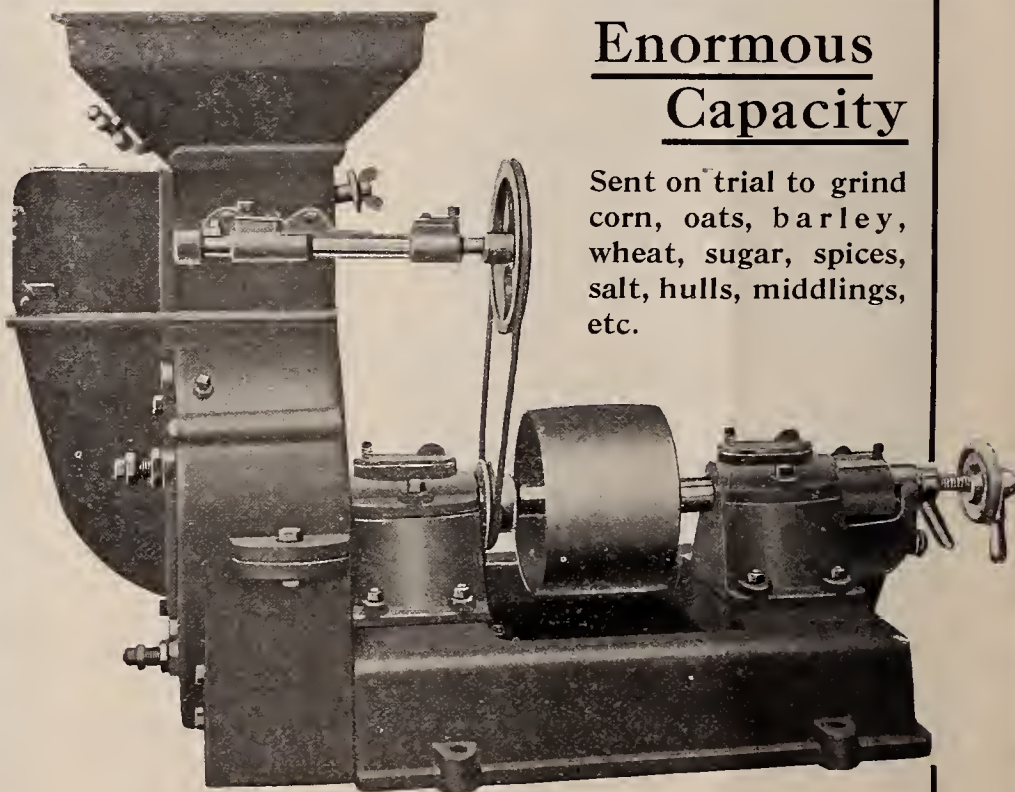
MANUFACTURED BY

The PHILIP SMITH MFG. CO., Sidney, Ohio

Write for complete Catalog No. 25, showing our entire line of Shellers and Cleaners. Grain Elevating and Conveying Machinery.

Enormous Capacity

Sent on trial to grind corn, oats, barley, wheat, sugar, spices, salt, hulls, middlings, etc.



FOUR SIZES — 16 inch, 18 inch, 20 inch, 24 inch

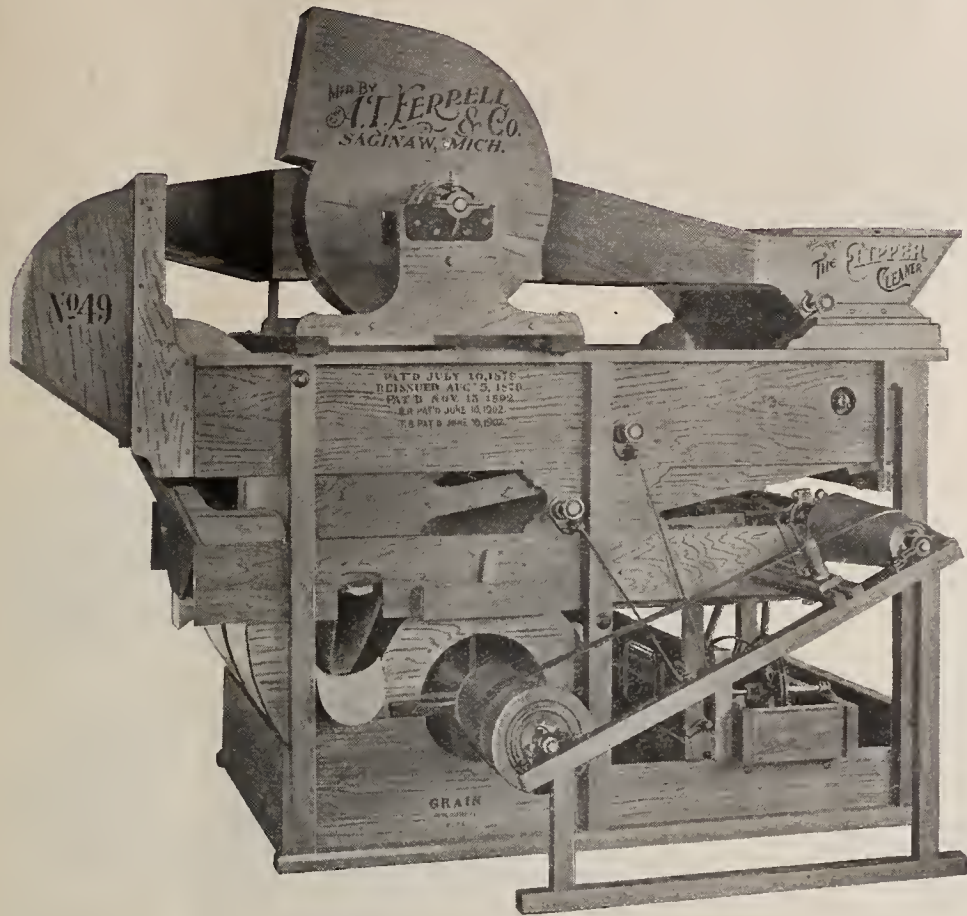
GET OUR CATALOG AND ASK US TO TELL YOU WHAT OPERATORS OF OUR GRINDER HAVE TO SAY — SOME OF THEM MAY BE NEAR YOU

Low Speed — Low Power
Shellers, Crushers, Elevator Equipment

ABSOLUTE SATISFACTION GUARANTEED

The National Company, PORT HURON, MICHIGAN

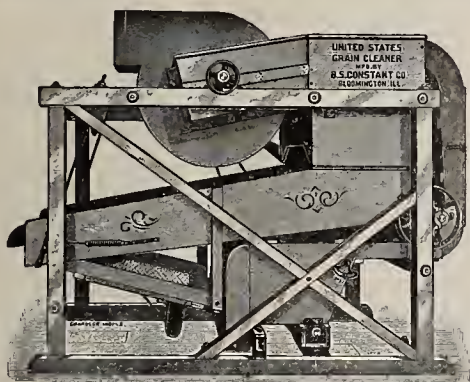
"Clipper" Grain and Seed Cleaners



The No. 49 Clipper is a first-class grain receiving cleaner for local elevators. It has large capacity, is solidly built, is dustless and will make the most difficult separations. It is simple, strong, convenient and will not easily get out of order. It requires less for repairs than any other grain cleaner on the market and is always ready for business. Ours is the only successful combination cleaner on the market. We give a 30-day guarantee with each machine.

If you are looking for the best cleaner, we would like to show you what we have. Our line of clover seed cleaners is strictly up-to-date. All sizes and capacity. We can furnish machines with Traveling Brushes, Air Controller and all modern improvements. Send for catalog and discounts.

A. T. FERRELL & CO., - SAGINAW, MICH.



THE U. S. Grain Cleaner

is the best in the Union and should be in the top of all elevators where Corn, Oats and Wheat are shipped.

Higher Grades—Higher Prices.
Long life machine.
Ring or Chain Oiling Bearings.
Balanced Eccentrix.
Five Separations and
All the Corn Saved.



The Constant Safety Ball Bearing Man-lift

the most satisfactory connecting link between Cleaner and Sheller.

Best made.
Easiest and safest.
Adjustable Brakes
which we guarantee.
State distance between
floors and get our
Net Price

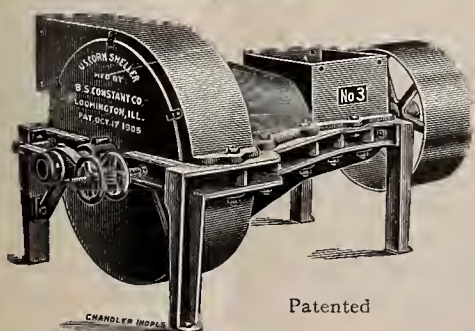
U. S. Corn Sheller

Fan Discharge,
over or under, right or left
hand.

Iron or Wood Frame.
No Lower Hoppering.
Cheapest Installed.
Quickest and Cheapest Repaired
of any Sheller on the market.

Send for a Catalog.

B. S. CONSTANT CO.
Bloomington Illinois



Patented

E. P. BACON, Prest. W. P. BISHOP, Vice-Prest. J. J. CRANDALL, Secy. and Treas.

E. P. BACON CO.

Grain Commission Merchants

MILWAUKEE—CHICAGO—MINNEAPOLIS

We are conducting offices in each of the markets above named, under the management of experienced Cash Grain men in the respective markets.

We do not engage in buying grain on track or otherwise and are not interested in any manner in the purchase or manufacture of grain of any kind either in the country or at terminal markets; our business being confined to the selling of grain and seeds on consignment for the account of shippers.

Our managers in the three markets keep in constant touch with each other by wire during trading hours as to the condition of the cash grain market at each place, and by exchanging samples daily by mail representing actual sales.

MILWAUKEE OFFICE

17 Chamber of Commerce

F. D. AUSTIN, Manager
CHICAGO

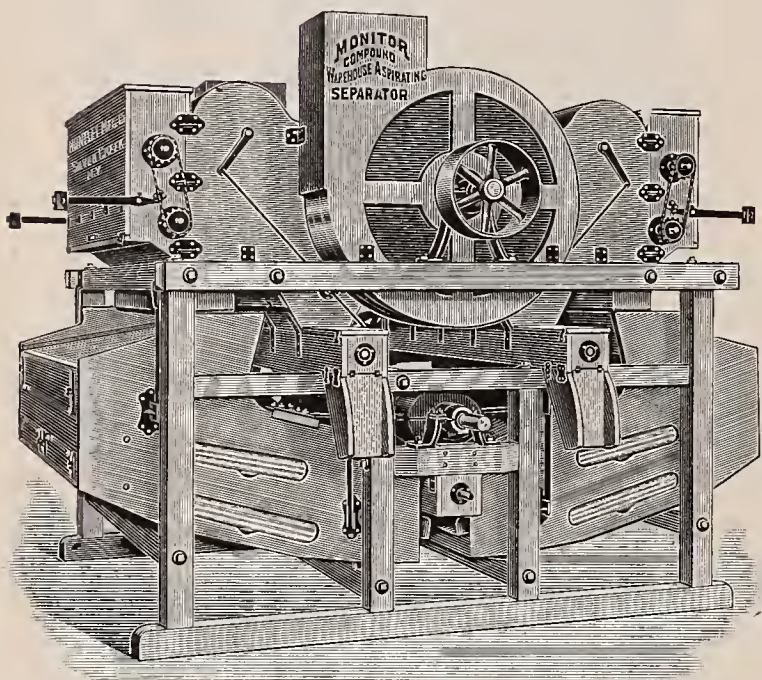
537 Postal Telegraph Building

W. B. HATCH, Manager
MINNEAPOLIS

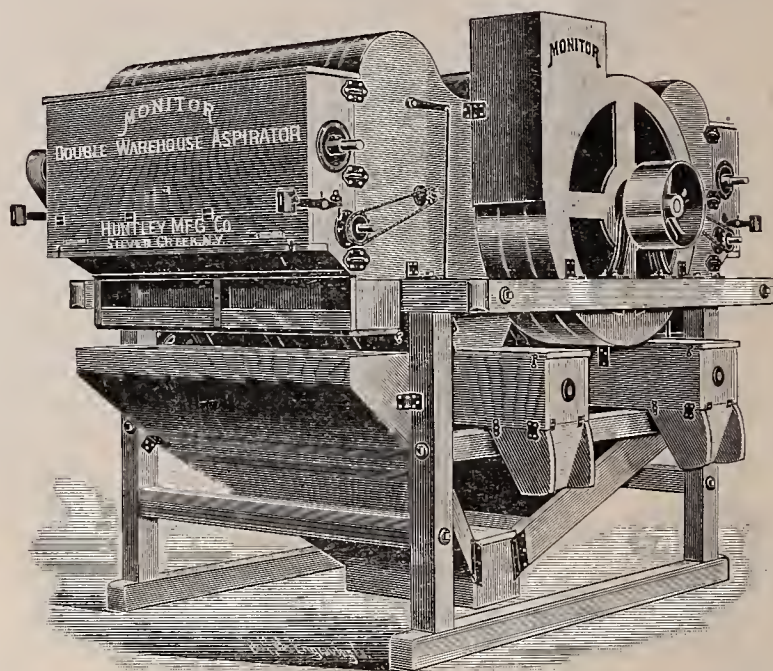
618 Flour Exchange

"MONITOR"

Which is to say like all "Monitors" they are patent protected, therefore, are exclusive in design—modern in appointment—superb in construction—perfect in regulation and absolutely superior in actual cleaning work they perform, so guaranteed. And further, you will find them MOSTLY in our largest, up-to-date, well equipped elevators that buy and RETAIN only that which has true merit.



A new design of large capacity cleaner. Handles extraordinarily large quantities of grain and it is adaptable for a wide range of cleaning work on wheat, barley, oats, corn, etc. Two separate streams of grain pass through the machine—virtually two separate machines in one frame. One air and three screen separations are performed—these are sensitively controlled. Very smooth running.



This is our large capacity aspirator, being a double type, or virtually two machines in one frame. Two streams of grain are handled independently. For straight aspirating work or for cooling grain it delivers big capacity with very little attention. In construction several of our improved features have been incorporated. A machine that will readily respond to the manipulations of the operator.

Great big capacity with small power and floor space

These machines are the direct result of the demand of many of our largest terminal houses who desire extraordinarily large capacity and have very little available floor space. Their actual capacity, bushel for bushel, in proportion to the power required to operate, is undoubtedly much greater than that of any known cleaner handling similar work. Like all "Monitors" these are productions originated by us, successfully used in many of our most prominent terminal houses.

We should like to acquaint you with the improved features of these machines, things which get you the maximum of perfect cleaning results with the minimum of care, attention and up-keep expense.

HUNTLEY MFG. CO., Silver Creek, N. Y.

Minneapolis, Minn.—A. F. Shuler, 316 Fourth Ave., South
Chicago, Ill.—F. M. Smith, 501 Traders Building
Portland, Ore.—C. J. Groat, 601 Concord Building
Wichita, Kansas—J. B. Ruthrauff, 301 S. Lawrence St.

AGENTS

St. Louis, Mo.—S. J. McTiernan, 25 Merchants Exchange
Jackson, Mich.—A. H. Smith, 206 Lansing Ave.
Akron, Ohio—A. S. Garman
Owego, N. Y.—J. H. Foote

The American Elevator and Grain Trade

A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

VOL. XXXI.

CHICAGO, ILLINOIS, DECEMBER 15, 1912.

No. 6.

CONCRETE ELEVATOR FOR MALT.

The illustration is not one of "the house that Jack built," but it is the house that holds the malt that lies in the house where none of the famous nursery events can happen, for it is cat-proof, rat-proof and fire-proof.

Horlick's Malted Milk Company at Racine, Wis., decided last winter that they must have more storage room for barley and malt, and started an exhaustive inspection of modern store-houses for this purpose. The result of this investigation established the suitability of concrete for the safe housing of sensitive grain for this Company; and the use of concrete for this purpose has never received a more significant confidence than when it was selected by the Horlick's Company as a depository for their malt supply. The exacting requirements of the Company's inspection were met at every turn, and the Macdonald Engineering Company of Chicago were selected to design and construct the building.

The storage is divided into twelve rectangular bins having a gross capacity of 100,000 bushels. The two outside rows extend to the foundation, the two center rows being elevated so as to afford working space and housing for the machinery. All bins are hopped to discharge to the receiving lofter leg and also to the malt leg which passes up through one of the bins to the cupola and reaches the distributing spouts by which all bins are filled.

The business transacted through the plant is to provide means of receiving barley both from the railroad and farmers' wagons, and to clean and transfer it to the malting plant adjacent to the elevator. All malt is received into the elevator through a conveyor system from the malt house, and is cleaned and elevated to the storage. The final disposition of the malt is made through a transfer spout connection to the malt grinding department, where it enters the initial process of being converted into Horlick's Malted Milk.

The elevator machinery is driven by electric motor receiving current from the Company's own power plant, and as all grain handled through the building is for home consumption no facilities for outside shipment are required.

In the group of handsome buildings which go to make up the plant of the Horlick's Company, the elevator stands out with striking prominence, the exterior being finished in a flat concrete-gray color, and it forms a prominent beacon to the location of the plant.

The machinery equipment was furnished by the Webster Mfg. Co. of Tiffin, Ohio, and the Weller Mfg. Co. of Chicago, the electric equipment being furnished by the Allis-Chalmers Company of Milwaukee.

"Legitimate speculation is desirable. It needs no apology. Extol its virtues," say C. A. King & Co. "Foreigners dictate on large crops. Investors and speculators restrain them and help the farmers. Lack of speculation is partially responsible for

[For the "American Elevator and Grain Trade."]

"CHOSEN PEOPLE" AMONG THE PLANTS.

BY N. L. WILLET.

Even among the rocks we find a kind of caste. The royal rocks are the crystals. They have form; they have structure. They have a different entity from granite, shale or sandstone.

Now, even in the plant world we likewise find a species of caste—and royalty. It seems as if the Great Maker had said to the plant tribes, "These are my chosen people."

For the legume stands out as distinct and separate in the plant world, as different from his fellows, as does the crystal in the mineral kingdom. Your precious stone is a crystal: your precious plant is a legume.

A very prince of plants indeed is the legume. Not that he is more handsomely dressed, not that he has a handsomer form or that he is more shapely—not these things. He is a prince because of the higher and better qualities possessed by him.

Now, what is a legume? It seems late in the day to be answering that question. But my experience is that the question is opportune and necessary. Some years ago I was in a body of men talking agriculture with a then president of the United States. He said, "Do oats increase soil fertility?" In an indirect way he was asking if oats were legumes. I have interested myself in the past year or more in repeatedly asking the question of my agricultural visitors, "What is a legume?" About one time in twenty I get an answer. I remember once a farmer coming excitedly into my office and telling me the story of the legume. He had just read it!

The legume is better

known in the South than in the North, the Southern forage legumes being (many of these, too, are well known in the North) alfalfa, Mel Alba, red clover, alsike clover, crimson clover, bur clover, Japan clover, cowpeas, soya beans, velvet beans, vetches, Florida beggar weed, peanuts.

Now, to discover if a given plant is a legume we have only to look at its roots. If these have bumps, or nodules, on them, set it down as a legume. Slice off a portion of the nodule and you find a veritable hive of infinitely small animal life. These animal-culæ have the sole and strange power of converting a gas into a solid; viz., the nitrogen as found in the air of the soil into nitrates, a plant food. These feed the plant and also store nitrates in the soil for future crops. The other plants rob the soil and make it poorer and need rich soil or guanos. The



REINFORCED CONCRETE MALT ELEVATOR FOR HORLICK'S MALTED MILK CO., RACINE, WIS.
Macdonald Engineering Co., Chicago, Ill., Engineers and Contractors.

present depressed prices. Price of our surplus makes the price for the crop. Prices on small crops are regulated more by domestic than world conditions. Agriculture is the foundation of our national prosperity."

Holders of receipts for grain in the Rock Island Elevator B, Chicago, have been requested to communicate with J. Rosenbaum, the lessee, as the work of demolishing the elevator will start as soon as possible after January 1, says the *Inter Ocean*. The notice shows 102,942 bushels No. 2 red winter wheat in the house, 40,000 bushels of which was put in previous to January 1, 1911. One receipt calling for 954 bushels was dated July 5, 1910, making the wheat about two and a half years old, which on a carrying charge of 1½ cents per month would mean storage charges of 45 cents per bushel.

legume lives mostly off the infinite, inexhaustible and free air.

The royalty of the legume is seen as follows: (1) It can be grown on poor, sandy soil which practically can grow nothing else. (2) It practically does not rob the soil. (3) It enriches the soil. (4) It feeds itself on free air. (5) It does not have to be fed by the expensive guanos. (6) Its forage hay is richer in food nutrients than other hays. Hogs eat greedily leguminous hays; and out of ground alfalfa hay is now being made even human food.

In the two crop per annum system of the South, the second crop should always be a legume. Southern Missouri once grew a one crop, wheat; today she puts in a second crop of early New Era cow-peas. This crop is soil enriching, and it nets as a crop to the Missouri farmer as much as the wheat crop. He is getting, as compared with the old way, triple results.

For a great while scientists have been trying to find animalculæ that would similarly attack other plants and make them nitrogen "fixers" and gatherers. Suppose we could convert corn, cotton, wheat, oats, barley, etc., into leguminous plants. Farmers, I fear, would die of sheer laziness. At any rate, it would be the death knell of high food prices. But the time of the omnipresent legume is not coming. If such animalculæ exist in the soil they would have attacked the non-legumes before this.

The softest "snap" the farmer has is a legume that is not an annual that needs planting every year, but a legume that is a perennial and comes up of itself every year. Such a plant is the Florida beggar weed. The scheme of the legume is that it shall be a second, or after, crop. The first crop shall be a grain crop—condensed food. The second crop shall be a leguminous, soil-enriching forage hay crop. The legume is the greatest of all rotating crops. The winter legumes are vetches and crimson clover.

CAUSE OF PELLAGRA NOT KNOWN.

The cause of pellagra, which Dr. E. J. Watson of South Carolina in his Norfolk convention address seemed so confident would be found in "spoiled corn," has not, in point of fact, been as yet ascertained. Such at least was the conclusion arrived at as the result of the discussions of the National Congress for the Study of Pellagra held recently at Columbia, S. C., the official home of Dr. Watson. A large number of papers on the disease, its cause and treatment, was read during the two days of the Congress, some from such men as Dr. Eugenio Bravetta of Milan, Italy; Drs. C. L. Alsberg, O. F. Black and H. Marsh of the Department of Agriculture at Washington; Dr. C. C. Bass of Tulane University, New Orleans, and others of equal professional authority; but at the conclusion of the Congress no more definite statement was issued than the following:

Whereas, The third meeting of the National Association for the Study of Pellagra is about to close its most successful meeting at Columbia, it seems fitting before final adjournment that certain things should be made a matter of formal record; therefore, be it resolved

That this Association reiterates the belief, formerly expressed, that the ultimate cause of pellagra is unknown, but it is of the opinion that in view of the indictment against "spoiled corn" measures should be taken by proper enactment to prevent its sale and consumption as food.

That this Association expresses the conviction that no satisfying evidence has ever been submitted which shows pellagra to be directly transmitted from man to man; and that in the present state of our knowledge the Association regards measures of quarantine and isolation for the disease unnecessary and unwise.

That the Association is convinced that there is at present no known specific remedy for pellagra, and any claim made for the efficacy of any especial therapeutic agent must be accepted with great caution.

That this Association recognizes pellagra in the United States as a matter of great importance to the National public health, and notes with approval the interest of the United States public health service in this subject. It is hoped the Congress of the United States may appropriate sufficient funds for the continued extension of the work.

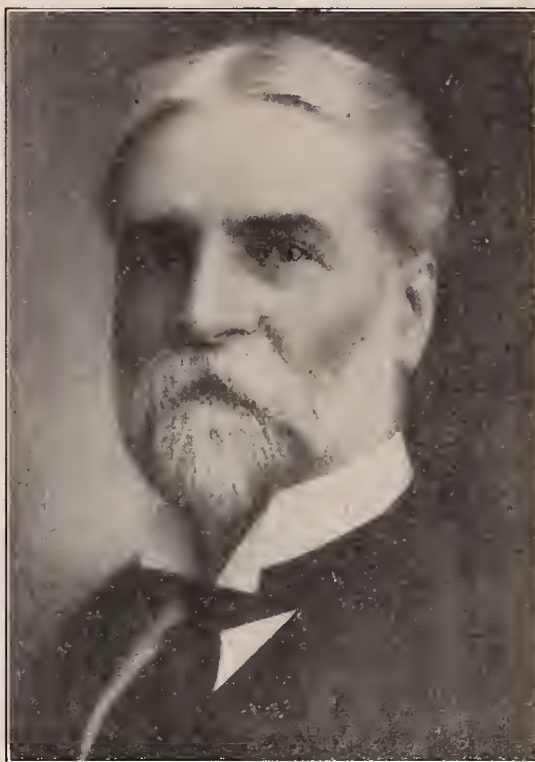
Officers of the Association were elected as follows: President, Dr. C. H. Lavinder, U. S. Public Health

Service; vice-presidents, Dr. J. F. Siler, captain, U. S. A. Medical Corps, and Dr. C. C. Bass, Tulane University, New Orleans; secretary, Dr. J. W. Babcock, superintendent S. C. State Hospital for the Insane; treasurer, Dr. J. A. Hayne, chairman S. C. State Board of Health. New members of the board of directors are: Dr. E. J. Watson, Columbia; P. E. Garrison, assistant surgeon, United States Navy; K. H. Beall, member of Texas State Board of Health, and L. J. Pollock, State Psychopathic Institute, Illinois.

WM. J. POPE.

William J. Pope, founder of the old and well-known Pope & Eckhardt Company of Chicago, died at the home of his daughter, Mrs. August C. Magnus of Winnetka, Ill., on November 20 of the ailments of old age, in his 76th year.

Mr. Pope was a native of Picton, Ont., Canada, his birthday having been January 17, 1837. He came to Chicago in 1856, and first was engaged in the dry goods business with T. B. Carter & Co., one



THE LATE WILLIAM J. POPE.

of the earlier mercantile houses of this city. In 1862 he became a member of the grain commission house of Sherman, Hall & Pope, a firm that after having been known successively as Pope & Davis and Pope & Lewis, in 1898 became the incorporated Pope & Eckhardt Company, of which he remained the head until January, 1909, when, owing to declining health, he retired from a business which under his direction had become one of the most dependable firms on the Chicago Board of Trade, practically all the present members of which have grown up in the business under his eye and tutelage.

Mrs. Pope was Mary Louise Littye. She died in 1893. Their only child, Mrs. Magnus, survives. The funeral services took place at Winnetka, with burial at Graceland.

Mr. Pope was a man of brilliant parts—an able business man, with some scholarly attainments, a charming converser and an intelligent writer. As a member of the Board he always stood among the leaders, identified as a member and as an official of the Board with all its forward movements. The fact that the present Pope & Eckhardt Company is composed largely of his former employes tells much of the character of the man that is to his abiding credit; and it would not be much trouble to find among his old patrons many a younger man now in good circumstances who owes his success to a hint, to the counsel and to the pecuniary help Wm. J. Pope was always willing to offer and to give to those he knew were worthy of his personal interest. Only the other day the writer met a northern Illinois gentleman, a comparatively young man, now living on Easy Street, who when Golden Opportunity knocked at his door, found Wm. J. Pope at his side, unbidden, indeed, but standing with willing hand

ready to help him open to the kindly visitor whom otherwise he might then have turned away unwelcomed. All men think kindly of such a man.

[For the "American Elevator and Grain Trade."]

THE GRAIN TRADE OF PHILADELPHIA.

WORK OF IMPROVING PHILADELPHIA'S HARBOR DEPTH—HEAVY FALL EXPORTS OF GRAIN—LOCAL TRADE.

BY E. H. ROSENBERGER.

The spirit of trade expansion has seized hold of Philadelphia commercial interests with a vim which bids fair to add materially in many ways to both facilities and endeavor as a trading center. The Philadelphia Commercial Exchange is now recognized as the foremost grain distributing center to the interior on the Atlantic seaboard. It is rapidly forging ahead as an exporting center. The success in this direction during the last few years has stimulated action which is hoped will still further broaden the scope of the territory to be served by this market.

Important movements are now on foot calculated to still further increase the capacity of handling grain in transit. The negotiations now pending are being carefully guarded and will not be made public until fully planned. Some of the hopes now entertained may not be realized, but back of the movement is a determination which means no let-up until results are accomplished. Those who are engineering the movements are working quietly but zealously and with the end in view of meeting the spirit of progress manifested in port development. They realize that they have awakened an interest both among the railroad interests and the port interests to provide better channel facilities to the sea and better terminal facilities for the handling of cargoes. Deeper draft ships can now come into the harbor than ever before. A complete thirty-foot channel is now an established fact, from the extreme upper end of the harbor to the sea, ninety miles away. This channel is likewise greatly improved by being widened at the bends and in other ways made more safe for navigation at all seasons of the year. Work on the thirty-five-foot channel is now in progress, and is being pushed in such a manner that the depth of the channel is increasing consistently from one end to the other year by year.

What the Exchange now wants in order to facilitate its handling abilities in the export business is deeper ships and more of them. This demand is being cared for in the movements under way. Shipping men of the port argue that Philadelphia is logically situated as a grain distributing port, being farther inland than any other port on the seaboard, and the harbor being situated on the west side of the river enables ships to come alongside the railroad tracks or elevators without necessitating lighterage. Shippers at Philadelphia are much encouraged at the outlook in its export business. The month of November was the banner month of the year for export trade at the port, eclipsing the month of May, which was the banner month for the year up to November 1. During the month of May the grain exports amounted to 2,878,554 bushels. To this should be added 60,077 barrels of flour, which represent an export of 300,385 bushels of wheat, bringing the aggregate up to a total of 3,178,939 bushels. The exports for November overtopped this aggregate, although the official figures are not available at this writing. The total exports for the first three weeks of November amounted to 2,215,454 bus., exclusive of flour. There were at that time vessels loading, chartered to carry another million, exclusive of the parcels loaded on line steamers.

The feature of the business of the Commercial Exchange is its distribution of grain to the interior. In this relation the market excels any other on the Atlantic seaboard, and is the chief distributing market of the East. Many members of the Exchange declare that Philadelphia sells more grain for local consumption than New York and Baltimore combined. Its territory covers the entire New England and Middle States, including a large part of the South. This makes the many trans-

portation problems important factors in the development of its business capacity.

A trades expansion party, known locally as "Trade Boomers," made a tour of the South in a train de luxe, in November, and returned with reports of rich opportunities which awaited Philadelphia trade, would they only bring about important changes in the transportation facilities between the market and the South. Many of these are now being worked out and others are on the hook for investigation, and to be taken up in turn.

The daily, weekly and monthly reports of the Commercial Exchange show but a small percentage of the actual business transacted on the floor. In the reports figures are only available for the receipts which actually reach the market and are inspected by the inspection department of the Exchange. In other words, it is only a report of the inspection bureau. A considerable amount of grain is shipped to the market and consigned to individual parties, which is never inspected in or out. The great volume of business transacted on the floor of the Commercial Exchange is grain which is reconsigned while in transit. The actual figures of this business are not obtainable with any degree of accuracy. The only source from which they may be obtained is from the railroad companies, and they refuse to "give up."

An effort was made recently to learn the amount of business done by reconsignment for Philadelphia account. While several of the agents were willing to give figures which were reliable, others either refused to give any figures or gave out figures which were palpably clear underestimates made with an effort to conceal the amount of business handled by the respective roads. A fair estimate of the number of cars of grain and feed reconsigned while in transit by Philadelphia Exchange members is placed at 35,000 a year. Some of the railroad men who were willing to aid in arriving at a fair total placed the estimate at 25,000 cars a year, while interested members of the Exchange say it will reach 40,000 cars a year, if not 50,000 cars.

All this makes the transportation problem an important one for study by Philadelphia grain dealers, and every effort is being made to obtain for the market and the port the best service as well as the best rates possible. It is the markedly efficient service which Philadelphia is able to give, by being ready to offer grain and feed in transit and ready for delivery at a moment's notice, which has built up for the Commercial Exchange this immense volume of trade which it now controls.

NORTH DAKOTA STATE ELEVATOR.

The voters of North Dakota on November 5 approved an amendment to the State constitution reading as follows:

The legislative assembly is hereby authorized and empowered to provide by law for the erection, purchasing or leasing and operation of one or more terminal grain elevators in the states of Minnesota and Wisconsin, or both, to be maintained and operated in such a manner as the legislative assembly shall prescribe, and provide for the inspection, weighing and grading of all grain received in such elevator or elevators.

The amendment was suggested a number of years ago by W. C. Macfadden, when representative (without vote) of North Dakota on the Grain Appeals Board of Minnesota and has since been agitated by the South Dakota Bankers' Association, of which Mr. Macfadden is a conspicuous member. Mr. Macfadden and the Bankers' Association felt that the Minnesota inspection was not fair to North Dakota wheat, and have pushed this movement of a State-owned elevator to "get fair play."

In addition to the authority expressly granted, it is now argued that the last clause of the amendment means that the State of North Dakota will provide its own inspection and weighing force in Minnesota and Wisconsin when it erects elevators there and will endeavor to house its own grain in its own house on its own inspection without paying any attention to either the Minnesota or Wisconsin inspection officials. The State of North Dakota is now represented on the Wisconsin Grain Commission,

one of the members being appointed on the recommendation of the Governor of North Dakota. The attempt to ignore the Minnesota and Wisconsin officers may lead to an interesting situation, if the time for it ever should arrive.

In this connection it appears that Senator McCumber promises to be "on the job" with his national inspection bill this winter at Washington.

WM. H. MOREHOUSE DEAD.

Wm. H. Morehouse, one of the grain and seeds men longest in business at Toledo, Ohio, died at his home in that city on November 21 after an illness of about six months, aged 67 years; cause of death, hardening of the arteries. His widow and his three sisters survive him.

Mr. Morehouse was a native of Peoria, Ill., but in 1860, at the age of fifteen years, removed with his parents to Toledo. He became interested in the grain trade with J. D. Cook & Co. In 1876 he formed a partnership with George F. Worts under the firm name of W. H. Morehouse & Co. Upon the



THE LATE WILLIAM H. MOREHOUSE.

retirement of Mr. Worts in 1882 Frank W. Annin, a brother-in-law, became associated with Mr. Morehouse under the old firm name, which association continued up to the time of Mr. Morehouse's death. The business was a most successful one, enjoying a large clientage during its thirty-six years of existence.

Mr. Morehouse was one of the founders of the Toledo Produce Exchange, known until 1878 as the Board of Trade, and was continuously one of its directors and was president for one term. He was a member of the Chicago Board of Trade. He was also one of the founders of the Draconian, now Toledo Club, of which he was a member until his death. Fond of good horseflesh, he was also a member and vice-president of the Toledo Driving Club; but, like many others, he surrendered his allegiance to the horse when the motor car became a practicable vehicle.

Mr. Morehouse was very popular on 'Change; and many people in Toledo will bear testimony to his kindness and generosity to those in need. He was a consistent and unostentatious giver to charity and was universally trusted and respected.

The Missouri State Board of Agriculture gives the following as the proper method of testing grain with a testing kettle such as is commonly used at elevators: "Place the kettle where it cannot be jarred or shaken. Pour from a scoop, bag or pan, held two inches from the top of the kettle, at a moderate speed, until running over. Strike off in a zigzag manner with the edge of the beam held horizontally."

THE AGRICULTURAL SOUTH.

Agriculturally speaking, the South appeals to the Northern mind as the "land of cotton"; it has always been so, and if in the "fore de wah" the South came nearer to feeding herself than she now does,—it is contrary to all traditions to say it, but frankly the South was not any too well fed before the war and the urban population did not draw very heavily on the farm surplus, because the urban population was comparatively small for the actual agricultural area embraced in the cultivated South. It was not the material wealth of the South that supported her armies during 1861-65, but the spirit of her people—their determination and above all their spontaneous and universal willing self-sacrifice and the courage to endure for a purpose.

It is an old story now, the awakening of the South in the recent past; and with it has come in a really wonderful way a new agriculture, hardly to have been expected under the circumstances. For the rural population has not been of the most hopeful class—even more discouraging to the educator than the Northern or Western farmer with atavistic tendencies. But the negro is improving; and even more encouraging is the outlook for "the poor white," a man who has been looked upon as a hopeless type—a degenerate, lazy, ambitionless animal, but who, since it has come to be known that he is a sick man who can be cured of his peculiar malady that has been destroying a once virile race, the hookworm, is found to be neither ambitionless nor mentally incompetent, but a man as truly a man as any among his fellows. The "worm doctor" is the great civilizing and uplifting force in the South today, whose works will tell with greater force ten years hence than now.

But a few facts as to the agricultural crops of the South other than "truck" and cotton may emphasize the view that the South is diversifying her crops and growing those things that her people eat as well as sell as the "cash crop," viz.:

	1912.	1911.	1910.
Corn, bus.	1,135,939,000	915,281,000	1,258,615,000
Wheat, bus.	98,086,000	101,750,000	128,123,000
Oats, bus.	137,865,000	93,936,000	70,751,000
Irish potatoes, bus.	49,199,000	26,368,000	41,945,000
Tobacco, lbs.	692,941,000	644,110,000	764,367,000
Hay, tons	11,926,000	7,254,000	8,351,000

The year 1912 shows increases for all these crops except wheat, but as to corn, wheat and tobacco 1910 shows the largest totals for the three years, the variations being due no doubt to seasonable conditions over which the farmer had no control. Now all these crops, large as they have been, have been produced by the South without any diminution whatever in the volume of cotton, the great cash crop of the country, which has been larger than ever before; and in that fact is to be seen the real progress the South is making from year to year in agricultural production.

IRISH AGRICULTURAL LABOR.

In spite of the marked increase of prosperity on Irish farms and of farmers during recent years, or since it became possible for Irish tenant farmers to buy their holdings, with government advances, from the absentee landlords, the Irish farm is face to face with the well nigh universal problem of the farm laborer. The number of such laborers is steadily decreasing, while those that remain are becoming more and more inefficient; or, perhaps this might be put in another way—that the efficient are leaving the farms, so that the inefficiency of those left behind is the more apparent. Yet the rate of wages paid to Irish farm laborers, as Consul Sharp at Belfast reports, has been increasing for some years past.

Wages are not high, it is true, by American measures, plowmen, near Belfast and Dublin, getting but a pound a week (\$4.87) with the general average of hands in the better districts only \$3.16 to \$3.90 per week. These are the nominal figures. The real wages are estimated by Consul Sharp as follows:

In considering what are the real wages of agricultural laborers in Ireland account must be taken of the value of allowances and the cost of board and lodging. As a rule full board is estimated at \$1.45 per week, though in some cases it is placed at \$1.70 and even \$1.95. Hence the real wages of farm

hands lodged and boarded, who receive \$1.22 to \$1.95 per week in cash, amount on an average to \$2.68 and up to \$3.40 or \$3.65 per week. In the case of laborers who receive a free cottage it is usual to find also a rood of potato land given or its equivalent, a certain amount of milk, or, in some cases, grass for a cow, fuel, etc. The actual worth of these payments in kind varies considerably, but they average 85 cents per week; and this again added to the wages of laborers having free houses gives a wage ranging from \$2.43 to \$3.65 per week, according to conditions.

Similarly in the case of boys under eighteen the actual wage paid averages \$1.70 to \$1.95 per week, allowing for the value of board and lodging.

These figures indicate the range of the real wages of agricultural laborers in Ireland. Taking the country as a whole, while nothing more than an estimate can be formed, the evidence goes to show that the average weekly wage in Ireland is the equivalent of \$2.92 to \$3.16.

The diminishing supply of permanent farm laborers is made up for (1) by friendly co-operation among farmers, large and small, in busy seasons, and (2) by a rise in the wages of temporary help for emergencies. At seeding time and a "turnip thinning," for example, daily wages range from 36 to 60 cents for men and 24 to 48 cents to women. In haying time, or for flax pulling, the wage runs from 48 to 97 cents per day according to locality.

It is perhaps not to be expected, then, that with such wages at home in mind, the Irish immigrant (and he is not now conspicuously numerous) should take kindly to farming in this country—it doesn't sound good, perhaps.

SECRETARY WILSON'S REPORT.

Secretary James Wilson's report of the doings of the Agricultural Department is the Secretary's "Swan Song," and in writing the report Mr. Wilson cannot avoid expressing what most people will agree is a justifiable pride in his sixteen years' record. Introducing an exhaustive summary of sixteen years' work, which fills about half the report, Mr. Wilson said:

Sixteen years have been of interest in the history of this department. Bureaus have been created and expanded. Lines of research, investigation, and demonstration have been multiplied. Congress has piled duty on duty from year to year. The corps of experts needed in the increasing amount and variety of service has grown greatly. The department has become a great agricultural university for post graduate work. Discoveries for the benefit of farm practices and improvements of old ones have been countless. The department has both promoted and begun a revolution in the arts and sciences of agriculture. Its influences for agricultural betterment have penetrated all regions of the national domain. At the close of a long administration, filled with accomplishments, it is fitting that the record of sixteen years should be written.

Compared with present proportions, most of the department bureaus of 1897 were small, were getting small results from their work, and were confined to few lines of investigation and endeavor. The whole department had on its pay roll in that year 2,444 persons. The number grew to 6,242 in 1906, and rapidly increased to 9,107 in the following year on account of the enforcement of the meat inspection law and expansion of work in forestry. The number has increased steadily since that time until on July 1, 1912, 13,858 were on the pay rolls of the department.

During the period under review the paid employees of the Weather Bureau have about doubled in number and are now 2,051. The employees of the Bureau of Animal Industry have increased from 777 to 3,311, and of the Bureau of Plant Industry from 127 to 2,128. The work in Forest Service was so small in 1897 that the paid employees numbered only 14. The number increased to 939 in 1905, to 2,012 in 1907, to 3,636 in 1910, and to 4,127 in 1912.

Along with the increase in the number of the department employees it is to be expected that the appropriations of money by Congress for the use of the department would greatly increase. For the fiscal year ending June 30, 1898, the appropriations for the department amounted to \$3,272,902. They increased to \$7,109,682.62 in 1905; and by 1907 the amount had risen to \$13,079,523.98. In consequence of the requirements of the enforcement of food laws and the care of the national forests, and in a less degree because of the general expansion of the work of the department, the appropriations by 1911 aggregated \$20,888,449.28, and for 1913 the total amount is \$24,743,044.81.

In wealth produced and in wealth conserved during these sixteen years the department has returned to the nation more than ten times these appropriations.

The South Dakota Railway Commission has issued for the year licenses for the operation of 1,175 elevators, and of this number 524 are in the bonded list, against 888 and 285, respectively, last year. These figures are an indication of the difference in amount of grain which is being handled out of South Dakota this year as compared with last year.

WESTERN ELEVATOR CO., MANITOWOC.

The Western Elevator Company's terminals are located at Manitowoc, Wis., on the C. & N. W. and the Soo lines, and consist of elevators "A," "B" and "B Annex," having a combined capacity of 2,750,000 bushels, and are situated on the Manitowoc River, with a water frontage of 1,500 feet. These houses are equipped to handle grain by lake and rail. Eastern rail shipments are made via the Pere Marquette and the Ann Arbor railroads, the cars being ferried

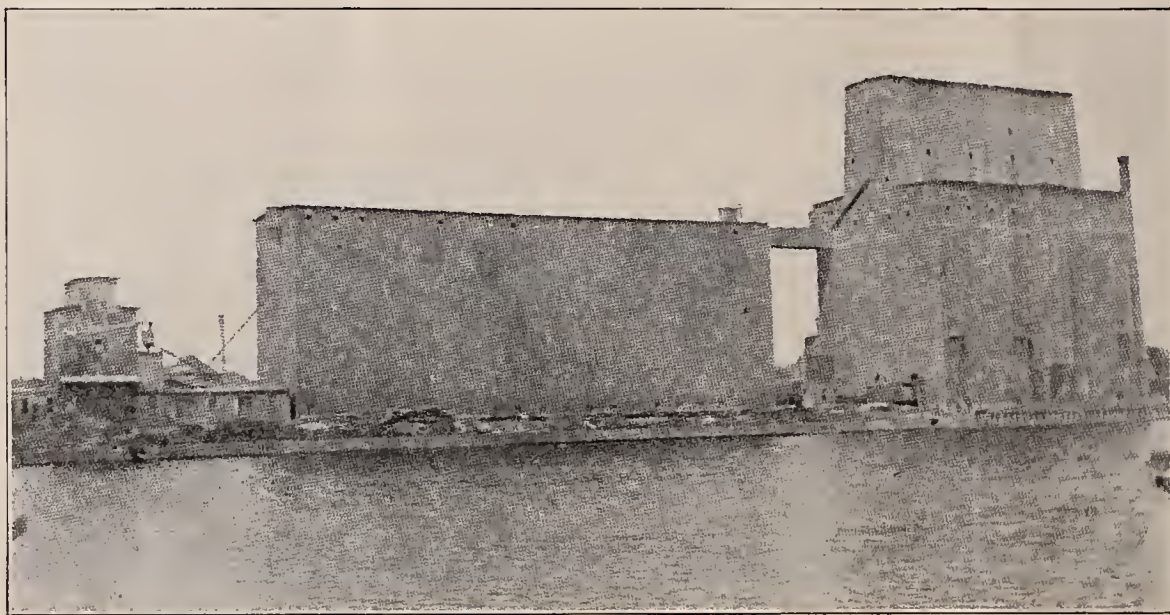


R. E. TEARSE.

Moffett Studio.

across Lake Michigan to Ludington and Frankfort daily throughout the year. During the navigation season extensive shipments are made by lake.

Elevator "B and Annex," of which a cut is shown, is a modern house, thoroughly equipped to handle and care for all kinds of grain. Four storage tracks, with a holding capacity of forty cars, lead to the two unloading tracks, and cars are drawn to unloading hoppers by a $\frac{3}{4}$ -inch power car-pulling cable, capable of drawing 25 loaded cars. There are



ELEVATOR B AND ANNEX, MANITOWOC, WIS., OF THE WESTERN ELEVATOR COMPANY.

two receiving legs, each of 12,000 bushels' capacity per hour, which discharge direct to 2,000-bushel receiving garner, from which grain is drawn into two Fairbanks modern, 90,000-pound hopper scales that are equipped with Fairbanks Patent Recording Beams. The unloading capacity is fifty cars per day. Grain can be distributed from the receiving or the shipping scales directly to the working house bins through twelve large trolley spouts, or conveyed to

the annex bins by a 36-inch belt conveyor of 15,000 bushels' capacity per hour.

Delivery of grain to cars is made from either of the three shipping scales or from the receiving scales through three cast iron direct car spouts. The loading capacity is sixty cars per day. The shipping legs have a capacity of 18,000 bushels per hour. Vessels of the largest lake type can discharge cargoes at elevator "B." The marine leg has a capacity of 7,000 bushels per hour on the dip. In making shipments by vessel, five elevator legs are used to elevate the grain to the weighing machines for delivery to the four shipping bins of 7,500 bushels' capacity each, the loading capacity being 35,000 bushels per hour. The four vessel-loading spouts are controlled by steel cables operated by double-gear winches.

The drying and purifying systems consist of an improved Hess Drying and Cooling Plant with a capacity of 1,000 bushels per hour, the air being driven by a 4-ft. 6-in. fan, run at 425 revolutions per minute, and a Western Elevator Company's Improved Purifying Tower with a capacity of 1,300 bushels per hour, both of which systems can be operated independently of the working house. Two elevator legs deliver grain to and from the drier and purifier.

The working house is equipped with a cooling chamber of 2,000 bushels' capacity for conditioning grain. A 4-ft. 2-in. double fan driven at 800 revolutions per minute furnishes the air.

A dust collecting system of large capacity collects the dust extracted from the grain by the machines. It is operated by a 3-ft. 10-in. fan driven at 1,300 revolutions per minute.

This elevator is also equipped with modern machines, consisting of seven cleaners, two clippers, two barley graders and one separator, with seven small legs to care for the grain handled by each.

All scales are of modern construction and are regularly tested to their full capacity, two tons of standard weights being used in making the tests.

The power is furnished by a Corliss Engine of 350 horsepower, and there are three boilers. An auxiliary engine of 85 horsepower connected directly to a 60-kw., 125-volt National Electric Generator operates the drying and purifying plants when the main house is not running. The electric generator furnishes light for the elevators and office. All legs and machines are driven by rope drives, the main drive ropes being of 2-inch and the others from 1 to $1\frac{1}{2}$ inch rope.

The engine room is equipped with a large fire pump, with a capacity of 290 gallons per minute,

and stand pipes and hose reach every section of the plant. A complete journal alarm system is installed.

A large, spacious office with an up-to-date sampling and testing room adjoins the elevator. The operation of the plant is looked after by Mr. M. C. Herman, superintendent, and Mr. Thomas McKeough is in charge of the office and local sales.

The main office of the Company is at 759 Insur-

ance Exchange, Chicago. The purchasing department is in charge of R. E. Tarse, treasurer, while James R. Godman has charge of the sales department. George J. LeBeau is manager of the elevators.

[For the "American Elevator and Grain Trade."]

A VERY ANCIENT PARALLEL.

WHAT THE REWRITING OF ROMAN HISTORY TELLS OF AGRICULTURE IN THE REPUBLIC AND EARLY EMPIRE.

BY E. GOODELL.

Among the fruits of the new method of writing history few have more interest than the volumes by various authors who, like Ferrero, Davis and others, have rewritten Roman history from the economic and social side, eschewing, as far as possible, the political and military details that hitherto constituted Roman history, written from almost every conceivable angle of modern political and legal theory. To be reminded, as we have in this way, that the Roman people had a home and business life; that they had to solve all the problems of the farm, of commerce and trade, of finance and taxation, of a turbulent urban and a diminishing and shifting rural population, much as we today are compelled to do, but with less human experience behind them, brings us into sympathetic touch with those ancient men and women in a peculiar way; because we now feel them to have been men of like natures to ourselves.

Prior to the Punic Wars the Romans were not a commercial but an agricultural people; agriculture and war were their chief occupations. For war was then strictly a business proposition, and usually so profitable that only citizens were permitted to become soldiers; and as the land was the great source of early Roman wealth, the acres of the conquered were the most coveted of the spoils. Rome, like Uncle Sam in a later age, gave to every soldier a farm and also placed upon it the conquered as slaves to work it.

The exigencies of the wars with Carthage, however, forced the Romans to build ships and to become navigators; and their engagement in commerce and trade followed naturally. With the enhancement of their wealth by trade, the trend of Roman occupations was changed; the popularity of agriculture as a way to riches began to decline, just as farming, as a money-maker's occupation, declined in our own country after the Civil War, when the men who wanted money and wanted it quickly saw their greater opportunities in trade, in speculation, or in manufactures made doubly profitable because of the high war taxes levied on imports to raise revenue, which were continued long after the immediate need of enormous revenue had ceased.

The influence of the Punic Wars on the simple habits of the Roman people was quite as great as was that of our Civil War upon the old life of our own people; and the old-fashioned folk of those early days regretted the change from agriculture to commerce as one tending to lowering the standards of popular morality and to the obliteration of the "old ways that had made Rome great." As early as about 149 B. C., even before the new commerce had "done its perfect work," one may see this regret for the vanished past lurking in the mind of Censorinus, the consul, who, in his speech to the Carthaginians urging them, the merchant princes of their era, to surrender to Rome, said: "The sea always begets a grasping disposition by the very facilities it offers for gain. Believe me, country life with the joys of agriculture and freedom from danger, is much more welcome. Although the gains of agriculture are less than come from commercial pursuits, they are surer and a great deal safer. A maritime city is to me more like to a ship than to solid ground, being tossed about on the waves of trouble and so much exposed to the chances of life, while an inland city enjoys the security of firm earth."

It must not be understood from the consul's reference to the joys of country life that the Carthaginians were merchants only. On the contrary, they were better farmers than the Romans them-

selves, and their land owners quite as powerful a factor in the state as those of Rome. Africa was, indeed, in those days, the home *par excellence* of scientific agriculture; and as early as 140 B. C. a great Punic work on agriculture in twenty-eight books, by one Mago, had appeared and was ordered translated into Latin at the public expense, for the benefit of Roman farmers. As there were then no facilities for "extension work" by traveling lecturers, the Roman masses derived little benefit from Mago's published learning, and Africa for several centuries thereafter continued to be the granary of Rome, from whose farms were brought the stores of grain that fed the Roman underworld—the idle, the vicious, the incompetents, the unfortunates, the derelicts of human life, who then fled, as the same class today flee, from the country to the great city, preferring a life of deprivation and squalor, surrounded by the glamour of others' "easy money," to making a home in the country where enough, if not plenty, has always been the lot of the land owner who labors, is reasonably thrifty and tries to be contented with his lot.

Another cause than a turning to commercial life may be assigned for the decline of agriculture in Roman Italy, and that was the invasion by Hannibal, who destroyed the farms and drove the people to the city, where idleness, the largess of the rich, and the excitements of urban life held them long after Hannibal and his army had been destroyed, as the same influences hold the poor within our cities today. For when the war was over, the Italians did not return *en masse* to their farms, and these rapidly fell into the hands of the land-grabbers, who farmed their great estates with slave labor, which was quite as disastrous to agriculture as absentee landlordism has since been in Ireland and elsewhere. Many efforts were made during the later republic and by the emperors to restore the prestige of Italian agriculture; but these efforts, like some of our own endeavors to help the farmer were "more furious than wise," as some of our own efforts have been more spectacular than effective. The population of Rome then was like our own slum population of today, made up of a class that had been thoroughly weaned of their love of the soil, such as it had been, and refused to go back to the land. This was as commonly true then as now. The age of Rome in her splendor was an age of large cities. Whether it were Rome or Alexandria or Antioch, these cities were all alike, in that they had their physical attractions for the mob, just as have the great cities of today, whose slum populations find the parasitic and unskilled occupations more to their taste than the toil of making a living in the country, devoid of the attractions of gregariousness.

While in all periods of Roman history, after the fall of Carthage, there were the reformers who looked, as many do in America today, for the moral and physical regeneration of the times in the cry, "Back to the farms!" this was particularly true of the more degenerate days of the empire, when Roman life, like our own metropolitan life, had become "pompous, gorgeous and supremely artificial." The corrective antithesis was thought to be the country, where nature could restore the wholesome equilibrium. And so when all political power and influence had passed to the Cæsars and their favorites, "men of quiet tastes as well as men of slender purses began to find life in the great cities irksome; and a movement the other way really started."

How familiar the argument! "At Sora and Frusino," says Juvenal, "you can purchase a pretty house for merely a year's rent of a cellar in Rome." And doubtless if the horticultural journalist and the half-tone printer had been in evidence then as he is nowadays the rural dilettanti of imperial Rome would have had their precursors of "Country Life in America," "Suburban Life," "Town and Country," etc., with pictures galore of the "pretty house"; and Juvenal would have written to them of the joys of Sora, Fabrateria and Frusino: "There by those towns you will have your little garden [with "spring planting calendar"]; you will have a well so shallow that you need no rope or bucket, whence you can easily draw water for your sprouting plants." And Pliny the younger and the rest of the men one would

like to have known would have said, as Pliny did to Caminius Rufus in the country: "Lucky man that you are, if you can spend your leisure there!" Here we have the "simple life" *a la* Roman, with asparagus from the hillside, eggs "still warm in the twisted hay," fruit "smelling very fresh," servants *sans* the livery and the table genuflexions of the city carver and waiter, with no ticker repeating the exchange quotations from the Forum or quoting the latest changes in the interest rate. No wonder Hadrian's commander of the prætorium, who resigned his high office to retire to the country, when dying, after seven years there, caused to be engraved on his tombstone: "Here lies Similis, who existed seventy-six years and lived seven!"

This "back to the farm" movement appealed then, as it does today, more to cultivated men of lean purses—or very fat ones—than to the populace. Years of subsistence on the munificence of the wealthy illy prepared the rabble for earning an honest living by the toil of the farmer. Immediately after the Hannibalic invasion many peasants, land owners, did go back to their old homes, and later still, when Cæsar made grants of the Campania lands, there was so great a demand for them that he had to limit the grants to fathers with families of no less than three children, in order to encourage the Rooseveltian type of nursery, perhaps; but the great mass of the Roman people, once inside the city walls, soon forgot their old life in the country and were loath to quit the games and the baths and to forego the free doles of the patrons' corn, even if they did have to sleep in cellars. The native Italian farmers even deserted Italy itself and wandered off to the west and north, where they took up "new" lands and rented them, peddled the "banan" (or its equivalent of those days) and went into trade, becoming the men of consequence in the provinces, where ultimately they lost their identity as immigrants—which, however, they do not seem to do when they emigrate in these later days. But, at least, they showed wisdom in those earlier times; for the peasants who remained at home, in the midst of the political disorder that came as the empire entered upon its decline, saw their lands absorbed by the land-grabbers who have existed in all ages and in all countries and who invented most of the evils of land monopoly that have filtered down to us through the ages—huge estates in England; absentee landlordism in Ireland; land laws in America that at each remodeling have made it more and more easy for the speculator to absorb the best of Uncle Sam's diminishing acres. It is all a wonderful story; but how little has it taught our people to guard against those selfsame influences of the past that seem to give to him that hath and from him that hath not to take away even that which he hath!

COMMERCE COURT ACT.

The Congress at the long session finally made an appropriation for the Commerce Court, at the insistence of President Taft, but unlike the other regular appropriations which run until July 1 of each year, that for the Commerce Court was made to terminate at March 1 next, so that the fate of this judicial body appears to depend largely on the attitude of the Wilson administration toward it.

The Court has not been popular in the least, and it has been unfortunate in that it did not seem to have quite understood its own powers and limitations, and had to be lectured by the Supreme Court in both respects; but it was hoped that now that "politics" have been put into the background for the time being, Congress would this session vote to continue the Court with a revision of the act defining its powers and jurisdiction.

The contract for the 40,000-ton grain elevator to be erected at Dock 9 by the Manchester Ship Canal Co. has been let to an English engineering firm, but there were some American bids. The building will be of reinforced concrete with asphalt roof, and will have 260 storage bins and 81 shipping bins, each 76 feet 8 inches deep. The belt conveyors will total about four miles in length.

IDENTIFY REGULARS.

It is one of the reasons for the existence of grain and stock exchanges throughout the commercial world, that membership therein entails certain duties and responsibilities of honesty, integrity, industry and competency, that the public trading in grain and securities may be assured that their interests will be safe when placed in the hands of duly constituted members of such bodies to act as agents for purchase or sale. And it is the duty of the exchanges also to make and to enforce such rules of business conduct for its members that any disposition to descend to uncommercial conduct shall be promptly taken notice of by the Exchange that the offender may be disciplined, for the protection of the public and also of the good name of fellow members and of the good repute of the exchange. And it would be difficult for the public to point to one duly chartered exchange in this country where this policy is not now adhered to in letter and spirit.

But the public will not always believe this; nor will certain individuals always take advantage of those elements of safety that this policy encourages and makes real. Nor are there wanting men outside the exchanges who are ready to take advantage of the known safety created by exchange discipline and of the further fact that so generally are grain commission men members of the regular grain exchange that most persons therefore assume that all men who solicit consignments of grain are always members of the exchanges, to turn to this source of confidence to their own advantage, although they themselves are not entitled, perhaps, to any sort of confidence whatever as agents for the sale of grain or anything else. Even grain shippers who ought to know better are not infrequently hit by the dishonesty of this type of men, to whom they have inadvertently shipped; and some farmers' company directors are notoriously disposed to make the same blunder by shipping to non-members of the exchanges, so stubborn is the prejudice against exchange members that ignorance of exchange methods and men has created. Indeed, in the Northwest fault has been found with one great and honorably conducted grain exchange, that it would not admit to its membership a certain person whom certain farmer interests were disposed to patronize, the refusal of the exchange in question being based on the fact that the conditions of membership as demanded for this person were such that the exchange power of discipline would be practically abrogated if membership were granted on the terms proposed.

In view of the fact that certain persons, regular dealers, have suffered through ignorance of the actual status in the exchanges of certain supposititious commission men, the following correspondence is reproduced:

The Indianapolis Board of Trade, Indianapolis, November 15, 1912.

To the Members of the Indianapolis Grain Trade:—At a meeting of the Grain Committee, held on Thursday, November 14th, the following letter was presented, and it was ordered that we recommend to the Indianapolis Grain Trade that Mr. Riley's request be complied with where possible:

Indianapolis, October 29, 1912.

Secretaries of Grain Exchanges—Gentlemen: From time to time our shippers find they are dealing with people in your market whom they presume to be members of your Exchange; later to their sorrow they discover they are not members.

The grain dealers of this Association, as a rule, do not wish to deal with other than responsible and regular grain dealers in your city; and as they have no general information as to who are members of your Exchange in good standing, I desire to suggest that you confer with your members and see if they will not put on all their stationery the name of the exchanges to which they belong; or, in other words, state they are members of such and such exchanges. This will be a good advertisement; and we will then go to our people with a letter and say to them that before dealing with any people in any terminal market, on the theory that such parties are members of an exchange, they should examine their stationery, as it is the rule for such stationery to reveal the fact if such people are members.

We desire to discourage this miscellaneous selling of grain in terminal markets, where there are regular boards of trade, to others than those who are members of such boards, and this letter is only to bring it to your attention that you may present the matter to your people, so that we may know promptly what they say.

I should not object to sending out from time to time a list of your dealers who are members of your

exchange and subject to its rules and regulations, if same were placed in my hands in a convenient form.

Any communication we may send to our members will be advisory and not compulsory and the reasons given for the recommendations that they deal with regular dealers, members of your exchange, will be that such exchange members are governed by certain rules and regulations that insure a high degree of commercial integrity and such rules are available to shippers in the enforcement of contracts with such members. You will please indicate briefly how such rules are available as above suggested.

As you will note, I am sending this letter to other Exchanges of the country, and I trust we may have your reply at an early date.

Yours very truly,

Charles B. Riley, Secretary,
Indiana Grain Dealers' Association.

Yours very truly,

WM. H. HOWARD, Secretary,
Indianapolis Board of Trade.

GRAIN TRADE REVIVAL IN NEW YORK.

The new merchants' organization of New York City, which has assumed the task of reviving (?) trade interests in that city, which, while absolutely increasing from year to year, have, in some particulars, shown a relative decline in volume, has been making some inquiries into the relative decline of the export grain trade of the port, which has, as a matter of fact enjoyed of late an absolute increase of activity and volume. This revival, says the *Journal of Commerce*, "is shown by several welcome signs. Among these is the reappearance of the floating elevators. For several years past these seemed to be on the verge of extinction. They are now much in evidence. Two or three of the big liners lying this week (of December 7th) at their berths in the Chelsea and other docks of the North River had a floating elevator along side busy pouring grain into their holds. It was noticeable in passing along the water front that mechanical conveyors are beginning to come more into use, some coal barges employed in bunkering being equipped with this apparatus and feeding the steamships in a more expeditious manner than has been possible heretofore, allowing the quicker turn-around in port, which is essential in modern port operation.

"The grain going out in a steady stream consists mainly of wheat, oats, barley and linseed. Corn has yet to come. It was stated December 6 at the freight department of the International Mercantile Marine that the volume of grain freight would have been even greater but for the blockage at Buffalo, owing to the lack of cars. The railways, however, appear to be overcoming their difficulties in this respect, the movement having materially improved recently.

"Expectation that the port will retain its grain export trade is further shown by the investment by the Lehigh Valley Railroad in a concrete elevator on the New Jersey side of the river at Black Tom. The building will be 200 by 75 feet and 80 feet in height. The elevator will be one of the most up-to-date grain elevators in the East, being built after the model of the elevators which have been adopted recently in the West.

"The interior will be fitted with a series of circular bins or metal legs running from the foundation to the top, and connected at the bottom. This method of construction relieves the walls of the building from the tremendous pressure of the grain and makes the handling of it easier.

"These and other marks of increasing grain transportation through the port are taken as fully bearing out the action of the New York Produce Exchange in the steps it has taken in recent years to rehabilitate the trade."

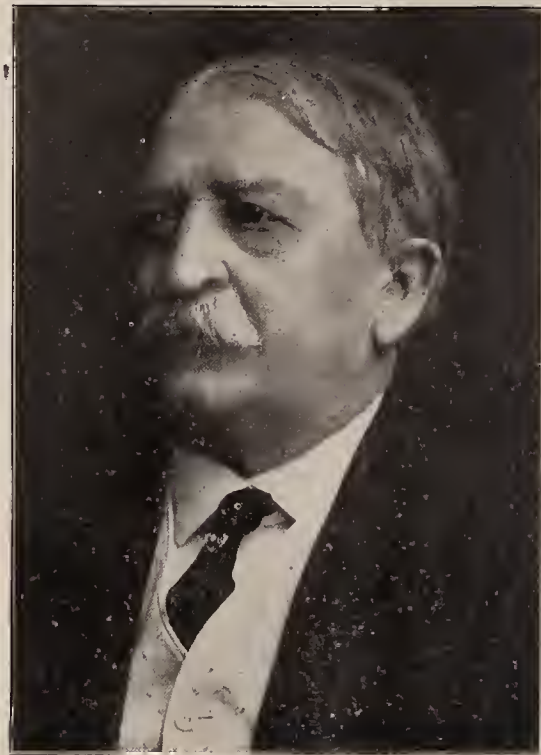
An Urbana telegram of November 22 says that: "While harvesting a plot of Leaming corn at the University of Illinois Agricultural Experiment Station workmen came across a peculiar type of corn which was put aside as a curiosity and planted last spring as an experiment to see what it would produce. The ear was cone-shaped and had the appearance of being composed of a mass of kernels on numerous irregular branches. To the surprise of Dr. Walter Gernert, who has charge of the experiment, the ear produced true to type and its progeny is cone-shaped and many branched like the parent."

ILLINOIS INSPECTION DEPARTMENT.

ADMINISTRATION OF W. S. COWEN—REDUCTION OF FEES
—IMPROVEMENT OF MOISTURE TESTING DEPARTMENT.

If—and it seems to be the general belief that he will do so—Gov. Elect Dunne after taking his seat in the Governor's office at Springfield does remove Chief Inspector W. S. Cowen of the grain inspection department, the latter gentleman will retire, after about ten years (more or less) of service, with the consciousness that he leaves the office in a far better moral and physical condition than when he found it,—leaves a department that whatever may have been its shortcomings is so far superior in point of service to anything the patrons of the department had known for many years before him, that there is no real measure of comparison. Mr. Cowen went into the office a layman; he has been for some years himself a competent inspector of grain, and has taken a personal interest in the practical workings of his office and has been himself the originator of some of its most important betterments. Mr. Cowen has had his share of the knocks that are always to be expected by a public officer, and he is entitled to credit also.

His latest service to the patrons of the office takes a dual form—a reduction of the fees and the instal-



W. S. COWEN.

lation of moisture testers that will enable the office to test the moisture content of every car of corn inspected and to note the result on the certificate.

As to the reduction in fees, the following correspondence is self-explanatory:

Chicago, November 15, 1912.

To the Honorable Board of Railroad and Warehouse Commissioners, Chicago, Illinois. Gentlemen:

In September, 1908, your honorable body issued an order whereby the system of inspecting grain at Chicago was changed from what was denominated "track" to "office" inspection. The extraordinary expenses incurred in making these changes were very heavy and largely absorbed the accumulated earnings of the Inspection Department, reducing them to a point where it became necessary to advance the fees for inspection. This advance was ordered and went into effect November 19th, 1909. The grain trade acquiesced in the advance with the understanding that the fees were to be reduced as soon as the financial condition of the Department would justify.

The advanced fees have proven entirely sufficient for the maintenance of the Department and the liquidation of the heavy expenses necessarily incurred in changing from one system to another. These extraordinary expenses are now no longer a burden to the Department, and a cash surplus of approximately one hundred thousand dollars has been accumulated. During the months of August, September and October, 1912, the earnings of the Department show a surplus of \$20,273.96 over and above all expenses for these three months alone.

Taking into consideration the exceedingly rapid and unnecessary accumulation of surplus earnings and the promises made the grain trade, that the fees would be reduced as soon as the financial condition of the Department would justify, also the fact that the intent of the law contemplates the Department shall be simply self-sustaining and not for profits, to continue charging a fee in excess of the necessities of existing conditions is contrary to

the intent of the law and works a hardship upon the grain trade from whom it is exacted.

In my judgment, the time has arrived when the promises made the grain trade, that the fees would be reduced as soon as possible, can now be kept safely and they should be redeemed. To that end I would most respectfully suggest the fees for inspecting grain in Illinois be restored to those in force previous to the last advance.

Attached please find a financial statement of the



SAMUEL H. SMITH.

Illinois State Grain Inspection Department from July 1st, 1911, to November 1st, 1912.

Respectfully,

W. S. COWEN,
Chief Grain Inspector.

FINANCIAL STATEMENT.

Cash remitted to State Treasurer July 1st, 1911, to Nov. 1st, 1912.....	\$258,174.52
Cash in bank November 1st, 1912.....	22,561.75
Uncollected earnings, Nov. 1st, 1912.....	19,658.22
Total.....	\$300,394.49
Expenditures July 1st, 1911, to Nov. 1st, 1912.....	212,099.22
Balance.....	\$ 88,295.27

In reply the Railroad and Warehouse Commission

1,000 bushels from boats; one-quarter of a cent per bushel from bags.

FOR OUT INSPECTION—Forty cents per 1,000 bushels, and 10 cents per wagon load to teams.

Said Rule No. 12 as amended shall be in force on and after December 1, 1912.

MOISTURE TESTERS INSTALLED.

In view of the importance now given by all buyers and handlers of corn to the moisture content of the grain, and in view of the many and almost continuous complaints of the inspection by shippers, based thereon, which have been made for several years past, during the entire winter and spring seasons when new corn is in movement, Mr. Cowen has succeeded in obtaining from the Railroad and Warehouse Commission authority to install testers enough to enable the Department to make a moisture test of every car of corn inspected and not merely of those of which there might be a doubt or of which a test should be asked for or demanded. These testers are now in operation and the illustrations shows a line of twelve 6-burner machines furnished by the Seed Trade Reporting Bureau of Chicago, which have capacity for making 144 tests per hour. It will be the rule of the future, therefore, to test every inspection sample and note the result on the certificate of inspection. The benefits of this procedure to both the shipper and receiver will be obvious.

SAMUEL H. SMITH.

Among the well-known veterans of the Department whom Mr. Cowen is expected to leave behind him is the now Chief Deputy Inspector, Samuel H. Smith. Two years after Gen. John Corson Smith became chief grain inspector under Gov. John L. Beveridge, in 1875, Samuel H. Smith, his son, came to Chicago from Galena, Ill., his birthplace, and took a position as helper in the Inspection Department. He was then nineteen years of age. Since that time he has served through every grade in the Department up to the grade of first assistant to the chief, to which office he was appointed in 1905, succeeding William Smiley, retired.

Mr. Smith's long experience in the Department, which for wide range and continuous service has been equaled by few men inspecting grain today, has made him an expert authority on grain second to none, probably, in this country, while his attendance on meetings of the National and State associations

[For the "American Elevator and Grain Trade."]

THE CONSERVATION OF RESOURCES.

THE IMPORTANCE OF IRRIGATION WORKS TO THE AMERICAN CONTINENT—PURPORT OF THE CARY ACT.

BY JULIAN KUNE.

In my last article I treated on water conservation in a general way, describing as far as possible its origin and various sources. I shall now treat on one of the most important uses to which water is applied, namely, irrigation.

The uses of water in promoting the growth of various plants of the vegetable world vary to a large extent. Some plants require a continuous supply of moisture, while others require but a moderate quantity. In humid climates, where the annual rainfall is fifty inches or more, there are many areas so saturated with water that farming is almost impossible, unless tiling is used for underdraining the fields; while again, in other areas, where the annual rainfall is deficient, the only way to produce crops is by irrigation.

Irrigation, or the artificial application of water to the land for the production of plant life, dates back to prehistoric times. The fact stands without gain-saying that no material substance has as great an influence upon man and beast as water. This holds true not only as to man individually but as to everything connected with his everyday life and occupation. The prehistoric man who cultivated the soil soon discerned that in order to have things grow he must have either sufficient rain or he must apply water artificially to his land. In the absence of sufficient rain he either dug wells or built pits or cisterns to save the water descending from the clouds; or, if the land he cultivated happened to be near a creek, stream or river, he managed to dig a ditch through which he carried the water to where it was needed.

Ancient civilization reached its highest point of development in semi-arid regions, where the water they used for the cultivation of their land came not from the clouds but was conducted from streams and rivers through ditches and canals. The ruins of ancient canals and aqueducts point to the fact that by many ages they antedated the more subsequent primitive methods of irrigation which up to this day most of the Asiatic and some of the European tillers of the soil still adhere to.

Some sixty years ago, while residing in Syria as the enforced guest of Sultan Abdul Medjid, I had ample opportunity for observing the primitive methods and the Fellahin employed in cultivating and irrigating their fields and gardens. They took the water from the rivers Barada and Abana, which in the Bible are referred to as Abana and Pharfar. The manner in which the water was taken then is still the same. A dam was built of solid masonry, extending out from the shore, forming a large reservoir that holds a certain quantity of water. Below this reservoir is a huge wheel with wooden buckets, which is driven by the water which fills the buckets which after attaining the height of the ditches and canals are emptied into them. There are hundreds of similar wheels to be seen on the Euphrates, all the way between Adena and Basra on the Persian Gulf. The same or similar bucket wheels to elevate water are used even in this country in some of the Western arid States. It is claimed that where no large quantities of water are required, it is the cheapest method of irrigation.

AMERICAN IRRIGATION PROJECTS.

I shall not refer here to irrigation methods of prehistoric times, although there are many ruins of it still extant in various parts of South America and some also in the southwestern part of the United States, notably in the Salt River Valley of Arizona, in New Mexico and in southwestern Colorado, where many evidences of ancient irrigation works may still be traced. I will refer only to the more modern methods of irrigation, which began upon this continent about three centuries before the English colony landed at Jamestown.

The ditches of Las Cruces and in New Mexico are about three centuries old. It is there that the same agricultural implements are even today in use that were employed in the days of the Pharaohs. Anglo-



ILLINOIS INSPECTION DEPARTMENT MOISTURE-TESTING MACHINES.

authorized Inspector Cowen to make the suggested reductions; and issued an order amending Rule 12 of the Rules of the Department, entitled "Fees for Inspection," as follows:

The Chief Inspector of Grain is hereby authorized to collect on all grain inspected under his direction as follows:

FOR IN INSPECTION—Thirty-five cents per car load; 10 cents per wagon or cart load; 40 cents per

of grain men have given him a broad acquaintance with the personnel of the trade.

The city of St. Paul, Minn., has provided a city scale in East Fifth St., near Broadway, at the request of the St. Paul Hay and Grain Board, which offered to operate the scale without expense to the city.

Saxon irrigation in the United States began in the Salt Lake Valley, Utah, where in July, 1847, the Mormons first turned the clear mountain streams upon the sunbaked and alkaline soil.

Nearly one-third of the United States, exclusive of Alaska and our insular possessions, consists of vacant public lands. These vacant lands are for the most part arid and desert-like in character and largely incapable of being put to any use for settlement and farming purposes without irrigation. It is incumbent therefore upon the Federal and State governments to assist in the irrigation of these lands and thereby hasten their settlement by sturdy immigrant farmers; and it is the duty of every loyal citizen to see to it that these arid lands are irrigated and subdivided into small farms. This would in the end lead to greater prosperity to the Nation than to leave them arid and unproductive, or merely as ranges for sheep and stock raisers. The contemplation of the present condition of the world, in which the greater part of the earth's surface is not utilized, is sad enough. This is especially applicable to the United States, where the remaining public lands cannot be turned into homesteads unless irrigated either by the help of the Federal or State governments or under their supervision.

The time may never come when all the arid lands will be cut up into farms. Cattle grazers need not fear that there will not remain sufficient grazing land for the feeding of millions of head of stock. The following figures will bear out what I assert: The aggregate of desert, woodland and forest forms a little over one-third of the extent of the arid and semi-arid regions; the remainder, which is estimated at about 446,000,000 acres, is grazing land. Stock grazing will always remain a great industry, although where irrigation is practicable it will have to give way to the raising of crops or forage. While the open range of the arid regions is generally supposed to be able to support a steer or a cow for every twenty or thirty acres, the same land when watered and put into alfalfa will feed ten steers; or, if put into orchards, will support a family of three or even four persons.

One of the most important steps taken to promote the irrigation of the arid lands of the United States was in 1894, when Congress passed the Carey act which gives to each and every State the right to select one million acres of public arid land and control its irrigation and settlement. Seven States have accepted this offer. The laws of five of these States require actual settlement and cultivation of the land, limiting each settler to 160 acres and attaching the water rights to the land and providing for the ultimate ownership by the irrigators of the ditches, or canals, they depend upon to furnish them with water. Wyoming, the State represented by the author of this act, was the first to accept the grant. Some of the largest ditches and canals have been built under the act. There can be no filing under the act on any land nor may there be any building of ditches for which there is no water, for speculative purposes. The rights to the use of water are not acquired by the builders of the ditches or the canals, but are attached to the lands reclaimed and are inseparable from them. Irrigators own both the canals and the land. They know before entering into possession what they are to pay for both and whether there will be a sufficient supply of water. This is certainly an excellent law, for it regulates both the settlement as well as the ownership of both land and water.

The so called semi-arid and arid regions of the United States embrace about two-thirds of its entire area and nominally extend from about the middle of the continent west almost to the Pacific Ocean. Regions which have twenty or less inches of annual rainfall are classed as arid; therefore the arid regions of the United States include but a small portion of the lands on the continent of North America. A large part of Mexico on the south of us and Canada on the north contain wide areas of arid land.

During the last few decades the cultivation of arid lands by irrigating it has greatly changed. Formerly the pioneer on settling on land that had less than a twenty-inch annual rainfall went to

work with a team of horses or oxen and a few ordinary farm implements and dug a ditch that connected his forty or eighty acres of land with a creek or stream, if within reasonable distance, and thus secured water for his farm; if too far from a stream then he dug a well and elevated the water either by wind mill pump or by some other simple contrivance. Under the present prevailing system the old method of irrigation would not be feasible. A very small proportion of the arid lands is near running streams or rivers, hence water has to be carried, sometimes hundreds of miles, from those streams or rivers. Ditches and canals, therefore, have to be dug under state or corporate regulation so as to equally distribute the required amount of water to those whose farms are miles away from the headwaters as well as to those whose farms border upon or are close to the stream or river or other source of water supply. For the man who could control the land along the streams or rivers would virtually control thousands of acres of land below him and back of him and thus become a land monopolist, unless the Government should step in and enact such

amination, but we believe when gathered it will yield more than 100 bushels to the acre." The seed was "Prolific," planted by hand on land that had been Bermuda grass sod for fourteen years, and was cultivated with a hoe.

STARCH EXPLOSION.

The plant of the Corn Products Refining Company at Waukegan, Ill., was badly damaged by a starch dust explosion on November 25, the starch house, a building 160 x 75 feet in size and five stories high, being completely demolished. The illustration shows how complete demolition was. The dead number eleven, and a large number, twenty-five, more or less, were injured. One of the dead was Frank Stanley, assistant foreman.

The explosion came without warning at about 1:35 p. m. It was of course preceded by a flash of fire which set fire to the powdered starch that filled the building and which thereupon exploded like gunpowder. The cause of this fire is not explained, if known—was probably a friction spark of the ma-



RUINS OF STARCH HOUSE, CORN PRODUCTS REFINING CO., WAUKEGAN, ILL.
Picture, Courtesy of Chicago Evening American.

regulations and laws as the above mentioned Carey act; and that is what, indeed, has happened.

The greatest developments of modern civilized peoples have undoubtedly taken place in the humid regions; yet notwithstanding the fact that a large part of the old world has less than twenty inches of annual rainfall, and so must be classed as arid, civilization there has kept pace with that of the humid regions; but of course it was aided by proper irrigation works. The importance of irrigation to the arid regions should not, then, be measured by the crop values, but rather by the influences which a home-grown food supply exerts on the growth and prosperity of the commonwealth and the individuals engaged in the various industries. The importance of irrigation is now realized all over the world as never before.

Miss Mae Patterson of Hampton Tp., Calhoun Co., Ark., has recently made a corn record, which is set down in an affidavit by three of her neighbors as follows: "We took from said [acre] patch of corn two hills, one having ten ears of corn and the other eleven; that said acre of corn ran from three ears to the hill to eleven; that five or six ears to the hill or stock was an average of the entire patch. We further certify that said corn patch was the best that we ever saw grown in the state. The corn from said patch was not gathered at the time of our ex-

chinery. This is the third similar disaster in the same plant within nine years, the next preceding having occurred about ten months ago. The loss on this occasion is estimated at \$100,000.

The explosion was accompanied by the usual horrors of such disasters—living men were hurled long distances by the force of the explosion, the maimed buried under the debris of the ruined plant, some half alive roasted by the remorseless flames that followed the explosion, victims outside the mill buried under falling walls; and there were the heroes who gave help to the injured, rescued the dying and removed the dead from the zone of fire, with the women of the city volunteering as nurses of the injured. These are the commonplaces of such accidents that unlock the ever living humanity of mankind that wells up to the surface in every community whenever occasion calls for its good offices.

Supt. Chas. Ebert, commenting on the explosion, is quoted as saying: "I have been through several disasters of the same sort. They all start the same way. Nothing has been devised that will prevent them. They are unavoidable." There seem to have been no dust collectors in the building.

State Civil Service Commission examinations were held on December 14 in Chicago, Springfield, Sterling, Murphysboro and Champaign for the following positions: Registrar, grain inspection de-

partment, class H, grade III, open to men over 25, salary \$208.33. Scope and weights: Training and experience, 3; special subject, including questions on office methods, routine and management, with particular reference to the registering of grain in elevators of the state, 7. Total, 10. W. R. Robinson was chief examiner.

JOHN C. KELLER DEAD.

John C. Keller, who for nearly forty years—all his business life—had been connected with C. A. King & Co., Toledo (for the past twenty years as cashier), died suddenly at his home in Toledo on November 17, aged 55 years. He leaves a widow and three daughters, as well as his mother and two sisters.

Mr. Keller was of German descent and in his character embodied most of the good qualities of that race with few of its faults. His life's story is that of a plodder who escaped most of the ills of plodding because of a sunny, sympathetic disposition and the habit of taking a personal interest in the world and in the people about him. He absorbed geniality only to radiate it anew in many directions and diffuse it wherever he was. Frank I. King says of him: "He handled many millions of dollars. He was strictly honest, faithful, energetic, always fair and honorable. He was a good accountant and a success financially. He was Vice-President of the Citizens' Trust Co. He was modest and gentle. The office force will mourn his loss greatly. Many will miss him."

The Toledo Produce Exchange, of which he had long been a member, adopted sympathetic memorial resolutions.

FARMERS' ELEVATOR TROUBLES.

In 1911 the South Dakota Farmers' Elevator Company at Verdon failed with liabilities approximating \$47,000. The company had several elevators on its hands, with W. B. Roby as general manager. When the failure came, the manager was made the goat and was arrested, charged with embezzlement. His trial was ended on November 14, with a verdict of not guilty.

It transpired at the trial that Roby simply followed the company's policy of giving "free storage" to its patrons, shipping the grain out as fast as it accumulated, but without hedging, however, against a call for the grain. When it was apparent the company stood to lose heavily by this practice, the managers directed Roby to begin speculating in an effort to recoup, but the speculations were unprofitable. Since the failure of the South Dakota Company, all of the companies in that part of the country have stopped the practice of "free storage." Their grain is now shipped and hedged. In this way the companies, while losing a chance to make more money in case the market runs in their favor, run no risk of losing by a fall in prices.

Now, that Mr. Roby would not play the part of the goat to hike off with the burden of the company's mistakes on his back, the stockholders still persist in finding some other cause for their troubles than those Mr. Roby's attorney developed at the trial. This cause, they would have it appear, was the reciprocity treaty with Canada that never went into force and effect!

ANOTHER BUT DIFFERENT CASE.

On November 15 Sherman L. Zea, lately manager of the La Hogue Farmers' Elevator Co., Iroquois Co., Ill., gave himself into the hands of the company, with a confessed shortage of \$4,025, which may mean a total loss to the company of \$12,000. He had deeded his property to his bondsman and turned in \$2,025 from other sources. The shortage was due to private speculations and secret transactions in grain which were not made of record on the books of the company. The other losses, to be sustained by the stockholders of the elevator company, were occasioned by legitimate transactions in which the manager paid higher prices to farmers for grain than was warranted by the market.

The manager was human enough. He wanted to make a record, just as though he owned the whole

kettle. He paid top prices; graded the corn high, and when it failed to make equal grade at Chicago or elsewhere, he charged up a loss which he attempted to recover by violent and, of course, ill-advised plunges in the pit, a line of operations with which he was entirely unfamiliar. When he was \$4,025 out, he had the wisdom and the courage to quit and 'fess up.

[For the "American Elevator and Grain Trade."]

SAMUEL CHARLES WOOLMAN.

BY E. R. SIEVERS.

The death of Samuel Charles Woolman, which occurred at Riverton, N. J., his out-of-town residence, on November 18, just before noon, is universally acknowledged as one of the greatest losses to the Commercial Exchange of Philadelphia. He had identified himself with the association in 1868, and was without a doubt, in his active career, the ablest man on the grain floor. After serving as director, chairman of the grain and other important committees, he was honored by the Exchange by election as president for four successive terms, from 1896 to 1899, following which he held the responsible posi-



THE LATE SAMUEL C. WOOLMAN.

The Phillips Studio.

tion of treasurer for four terms from 1904 to 1907; and on all public occasions he invariably took the lead in every action and movement that inured to the benefit and advancement of the best interests of the Commercial Exchange. He attended from time to time the annual trade conventions and appeared before the Commerce Commission on a number of stated occasions.

Mr. Woolman was born in 1838 in Burlington, N. J., and was educated at Westtown, Pa. He was engaged as a land surveyor in the oil regions of the latter state during the exciting times of the petroleum discoveries. Later on Mr. Woolman built up a very extensive grain, feed and hay business, known everywhere under the firm name of S. C. Woolman & Co., the present headquarters being at 421 Chestnut Street, Philadelphia.

Mr. Woolman made a tour of the Orient and visited the Pacific slope in search of recreation and health; with no avail, however, physical infirmities and declining years often keeping him absent from his accustomed place on 'change. A widow, two daughters and two sons survive. He was in his 74th year at the time of his death. His two sons, who were associated with him in business for some years, continue in the firm as the successors of their distinguished father.

There was a large attendance at the funeral, many railroad, financial and trade representatives being present, including several of the former presidents of the Commercial Exchange, that organization taking prompt and suitable action on his death.

Walter Keen Woolman of the firm is a director of the Commercial Exchange and chairman of the

transportation committee, while Clarence S. Woolman is a member of the hay and straw committee. Connected with them in business is John H. Irwin, the hay authority, and George A. Wenz, in charge of the feed department.

Mr. Woolman was in his accustomed seat on the grain floor ten days previous to his passing away, and was one of the leading spirits who brought about the removal of the Exchange from its old home in the Chamber of Commerce Building at Second and Walnut Streets into the main floor of the Bourse Building.

The memorial committee of the National Hay Association has adopted the following resolutions:

The report of the death of our fellow member, Mr. S. C. Woolman, came to us with peculiar sadness. Although his death was not unexpected, yet we feel that it is proper for our Association to give expression at this time to our esteem and respect for him, as we recall the many years spent by him in the activities of our business and life; therefore,

Resolved, That we recognize the masterful hand of our God in gently relieving him from the suffering and loneliness of the past few years, and that we place on record our high regard for him as a man and a business associate whose activities can be remembered so well in active circles for over forty years. His loss will be severely felt in his own community and by our Association, and with much sorrow we regret that he has passed to that bourne from which no traveler returns.

Resolved, That we send to his family a report of our action, offering them at the same time our deep sympathy and sincere regrets, and that these resolutions be entered on the minutes of the National Hay Association.

SECRETARY WILSON.

Secretary James Wilson of the Agricultural Department was appointed to this cabinet position on March 5, 1897, and will retire from office on March 5, 1913, after a continuous service under three presidents for sixteen years, a cabinet minister's record unique in our national history. Some brief mention of his successes are mentioned in another place in these columns.

Secretary Wilson, as the New York *Evening Post* reminds us, has had a long public life and deserves the gratitude of the American people for many things done by him and under his direction. He was born in Scotland in 1837 but has lived in the

United States for sixty years. He served in several of the General Assemblies of Iowa, in one of them as Speaker; and also as Railway Commissioner, regent of the State University, director of State agricultural experiment stations, and professor of agriculture in Iowa Agricultural College. He was first elected to Congress in 1872, and served in the Forty-third, Forty-fourth, and Forty-eighth Congresses. It was President McKinley, who, in 1897, appointed him Secretary of Agriculture, reappointing him in 1901, as Roosevelt did in 1905, and Taft in 1909.

Probably no part of our common country owes more to the work of the Department under Secretary Wilson than the South, where the boll weevil evil has been turned into a rotation blessing; where the one-crop evil that was driving its labor from place to place, making nomads of the negroes, has been measurably corrected; where 164,000 square miles of land was cleared of the fever-tick and cattle culture begun; and where "Dr. Knapp—that good old Roman—did another thing. He organized the boys by thousands, and interested them in all the things that make for good farmers and good farming. And when he had done that he organized the girls, to learn how to keep the little home clean and comfortable and attractive; taught them better ways to cook, and how to can fruit so that they would have it in the winter. I told him that if we would start this work the ladies of the South would take it up," said Secretary Wilson. "I knew the Southern women and the Southern spirit. They have done it. It was only a question of starting the thing; we counted on the South to take care of it afterward. They have made wonderful progress down there, and we are very proud of them.

"Don't you get the idea that I am taking credit for this—all these things were the fruit of councils of war—we have them constantly," said Mr. Wilson to the *Post*: "the splendid fellows in the Department here, the scientific experts that we have trained and

brought in, are the ones who have done it. Of course, it was my task to pick out the right men to do these things. I think I have done pretty well, on the whole, in that respect."

The *Boston Transcript* adds: "We wish the Secretary peace, comfort, prosperity and long life in his coming retirement. He need not be haunted by a fear that the forces set in motion during the past sixteen years will be halted, even if he can no longer have a hand in their direction. The standards have been established and there will be no backward turning. From scores of State centers, science and the farmer are co-operating and the movement is bound to grow, whatever men come or go to or from the Agricultural Department at Washington."

[For the "American Elevator and Grain Trade."]

ELEVATOR BUILDING AT PHILADELPHIA.

THE NEW PENNSYLVANIA RAILROAD ELEVATOR WILL HAVE
LARGE GRAIN DRIER—GIRARD POINT ELEVATOR B.

BY E. R. SIEWERS.

Since his return from a 1,300-mile trip of inspection through the West, the Chief Grain Inspector, Capt. John O. Foering, has made report to the Com-

mercial Exchange, and as a result the Pennsylvania Railroad authorities have ordered James Stewart & Co., contractors for the new million-bushel Girard Point Elevator, to equip that plant with a Morris Grain Drier with a capacity of 3,000 bushels per hour, said to be the largest grain drying apparatus along the Atlantic seaboard. They will also provide four In-vincible Grain Cleaners, each of a capacity for 5,000 bushels per hour.

Everything is now going on without a jolt in the construction of this new elevator along the Schuylkill River, and its completion is promised before the close of the coming year, as the foundation work is nearly finished. Thereafter the present Girard Point Elevator B, of which we present our readers with a striking illustration as it was loading grain into one of the turret steamships, and the original capacity of which was 1,100,000 bushels' storage, with grain receiving capacity of 125 cars every ten hours and delivering capacity of 250,000 bushels every ten hours, may be used in the future for a storage warehouse, providing it is not dismantled and torn down. It was erected in 1862, and is one of the prominent trade landmarks of the port of Philadelphia.

The Port Richmond Grain Elevator of the Philadelphia and Reading Railway has received quite re-

SOME LOCAL NEWS ITEMS.

The resignation of President James McCrea, after a continuous service with the Pennsylvania Railroad Company for almost a half a century, and the appointment to that position of Samuel Rea, former vice-president, the noted civil engineer who supervised the construction of the Hudson River Tunnel, the new Grand Central Depot and other extensive works in and about New York City, is said to mean much for the general trade interests and improvement of terminal facilities at Philadelphia.

All of the outstanding stock (250 shares) of E. L. Rogers & Co., grain, feed and hay commission house of Philadelphia, which dates back to 1863, the par value of which is \$100 per share, was offered at public auction by the executor, and the highest bid was \$140.

After a meeting on the grain floor, and a report made to the grain committee of the result, the grain rules of the Commercial Exchange were di-

DEATH OF COL. S. C. REYNOLDS.

Col. Sheldon C. Reynolds of Toledo died at his home on November 22 of pneumonia, after a short illness. He was 77 years of age. One son, Fred J. Reynolds, and his widow survive him.

Col. Reynolds was born in Essex County, N. Y., on November 29, 1835, his father being a farmer. He obtained a farmer's boy education and at the age of sixteen went into business as a dry goods clerk for two of his brothers at Jackson, Mich. He subsequently purchased one brother's interest and continued in that line of business for fourteen years. In 1869 the dry goods business was sold and three brothers—W. R., W. B. and S. C. Reynolds—bought the Amanda Mills in Toledo and began to make flour, operating as Reynolds Brothers. They were very successful, increasing their output from 20,000 barrels in 1872 to more than 100,000 in 1875, when they sold the property. Immediately thereafter Col. S. C. Reynolds began business as a grain commission merchant, operating as Reynolds Brothers, associating with himself at the commencement of this venture Charles L., a son of W. R. Reynolds. Later Mr. Reynolds' son, Fred J., and J. H. Bowman were



THE OLD GIRARD POINT ELEVATOR B, IN USE FOR FIFTY-ONE YEARS.

rected to be changed as follows in relation to grading of oats: The grades of "rejected" and "no grade" oats have been abolished.

The following new grades were adopted:

"No. 4 white oats shall include white oats inferior to No. 3, but suitable for warehousing.

"No. 4 mixed oats shall include all white oats inferior to No. 3, but suitable for warehousing.

"Sample oats shall include all warm or damaged oats unfit for warehousing."

One cargo of 350,000 bushels of grain for export valued at \$350,000 was recently booked for export from Philadelphia and a big trade in corn is anticipated in the same market.

The Oklahoma Farmers' Broomcorn Exchange is now in operation at 17 and 19 East California Avenue, Oklahoma City. W. J. Rodman of the Chamber of Commerce is manager. The Exchange has storage room for 100 cars of brush.

Three grain buyers in a certain North Dakota town were arrested immediately after "All Hallowe'en" charged by a track-loading (scooper) competitor with malicious mischief, in that they had tampered with his gasoline engine and his loader. The court bound over the three to the District Court for trial.

added to the firm. Mr. Reynolds was, from the formation of the house, virtually the sole manager and conductor of the business. In 1875 2,000 car loads of grain were handled by the firm, while in 1885 it reached 85,000 car loads. Mr. Reynolds was the first grain merchant to bring grain to Toledo from west of the Mississippi and Missouri Rivers. He was a member of and the largest stockholder of the Produce Exchange, and was one of the first to start the movement which resulted in the erection of the Produce Exchange building, one of the finest structures in the city at the time of its erection.

Col. Reynolds was interested in many other lines of business, notably banks and railroads. He was the principal stockholder in the First National Bank, the Second National Bank and the Toledo Savings Bank and Trust Company, and was a member and principal stockholder in the Toledo Produce Exchange until shortly before his death. Colonel Reynolds was a director of the Wabash Railroad Company and had served in a similar capacity for the Hocking Valley, the Wheeling & Lake Erie and the Kanawha & Michigan Railroad Companies. He was also for a number of years president of the Lake Erie Transportation Company and one of the boats of this line bears his name.

In politics Mr. Reynolds was a Democrat, but he

never took other than a voter's interest in political affairs. In 1884 his health caused him to withdraw from engrossing business duties and he took an extended sea voyage, returning greatly benefited. His principal relaxation was yachting; and his fine steam yacht, the Sigma, was well known in the principal ports of the great lakes.

AT MAYVIEW, ILLINOIS.

Mayview, Illinois, is in Champaign County, almost under the shadow of the University of Illinois and well within the influence of the inspiring life of the agricultural college; and the condition of the farms and the farmers thereabouts is well indicated by a line in Mr. Walton's letterhead: "Farm Machinery and Automobiles."

The elevator of the picture is that of H. T. Walton, Mayview, a cribbed house, galvanized iron-clad, with 50,000 bushels' capacity. There are eighteen bins, ranging in size from 1,500 to 4,000 bushels, and conveniently constructed to transfer grain from bin to bin for the purpose of cooling and conditioning grain having a tendency to heat.

The elevator machinery is operated by electric power, and the house is as completely a "one-man"

[For the "American Elevator and Grain Trade."]

REVIVING THE I. & M. CANAL.

SOME HISTORICAL DATA—THE CANAL IN ITS DECLINE—EFFORTS TO REVIVE ITS TRAFFIC.

The history of the Illinois and Michigan Canal is very interesting, involving as it does that of the beginning of the development of northern Illinois. From the time the first white man crossed the low divide in Cook County, that separates the waters of the Great Lakes basin from those of the Mississippi Valley, the possibilities of such a channel was always present to white men. The first official word in favor of a canal was in the message of President Madison in 1814. Illinois' first Governor, Bond, urged its construction; in 1821 funds for a survey were appropriated by the legislature; in 1826 Congress gave the project 300,000 acres of land; in 1828 a new survey was made by the State, and at last, in 1836, the work was begun, only to be interrupted by the commercial breakdown of 1837. In 1845-6 Dutch capitalists were prevailed upon to supply the money (\$1,600,000) to complete the Canal, taking the Canal's property as security and receiving the proceeds of its lands and its operation from the date of its opening in 1848 until the

the Canal tolerable. Then the Bridgeport pumping station was instituted to flood the Canal sufficiently to keep navigation open between Chicago and the Desplaines River basin at Joliet, where the Canal crossed that river. These pumps were kept at work until after the present Drainage Canal was constructed and put into service; then, in spite of a contract made by the Sanitary District, on its own initiative, with the Canal Commissioners, by virtue of which the District, in view of certain rights and privileges in Canal properties granted it by the Canal Commissioners, obligated itself to keep those pumps in continuous operation for the purpose of insuring the navigability of the Canal, the trustees of the District, after they had secured the privileges they needed, and the Sanitary Canal was opened, went into court and secured a cancellation of that contract, and abandoned the Canal.

By this time the Canal was in desperate straits for funds. Although, as an open channel of potential utility, it regulated freight rates in all northern Illinois, immensely to the advantage of grain dealers and a few other shippers in at least the northern one-third of the State, it still had no money to pay its current operating expenses and repairs and also the scandalously extravagant "overhead" expense of management by a triple body of appointive commissioners, but one of whom for some years ever lived in a canal county or town, and whose only duty was to go periodically to the Canal office at Lockport, eat a good dinner at the Canal's expense and audit the accounts, especially their own per diem for 365 days' service each per annum, (and in the case of one commissioner, it was said, for some days in excess of 365 in a single year!) The Canal's earnings were by law payable into the State treasury, as are the earnings of the grain inspection office today; and it required an act of the legislature to get them out for any purpose; so that it could use none of its unexpended earnings. For several sessions before the Canal finally "quit," the legislature made it an annual allowance, with which to keep the Canal open and in some repair. These appropriations would have gone farther than they did to keep the Canal in repair if the commissioners had had as much concern for the physical condition of their trust as they did for their own and their favorite attorney's incomes out of the petty stipend available; but when at last the legislature did appropriate an adequate sum to put the Canal into good repair, about six or eight years ago, a Chicago member of the legislature, stimulated to such action, perhaps, by the continual sneering reiteration by the Chicago newspapers of charges of the general uselessness of the "Tadpole Ditch," brought suit to enjoin the payment of the money to the commission and succeeded, thanks to the constitutional provision prohibiting the expenditure of State funds for the "construction of railroads or canals." Then the Canal "quit," with the Joliet-Chicago section—about one-half of the Canal—so filled with sludge of Chicago's sewers that its navigation was impossible; and that is its condition today.

However, within the past several years the Sanitary District trustees have caused a junction by lock to be made of the Sanitary Canal with the Canal at Lockport by means of which a boat may now pass from the Sanitary Canal into the Desplaines basin and thence into the western section of the Canal, extending from Joliet to the junction with Illinois River at La Salle-Peru. But during these years of disuse that section of the Canal has also become greatly out of repair. It needs dredging; its banks need repairing; its feeders need rebuilding, especially the Fox River feeder of the last two levels, and its locks need rebuilding.

The Canal was built to carry a 200-ton barge and that kind of a boat it is still able to lock through from Peru to Chicago, the passage being still negotiable over the numerous bars that need dredging to make a safe channel. But such a canal is too small. The Hennepin Canal, crossing the State from Illinois River at Bureau to Moline-Rock Island (with a navigable feeder to Rock River at Sterling-Rock Falls and Dixon) will float a 600-ton barge. It would cost but a meager sum,



H. T. WALTON'S ELEVATOR AT MAYVIEW, ILL.

proposition as it is possible to make an elevator that is doing business every day.

This house is one formerly owned by J. B. Walton & Sons, one of the oldest firms in grain in Illinois, having been founded in 1873 and continuing until May last, when it was dissolved.

ELIMINATING THE BAG.

In Washington and other parts of the "Inland Empire," where grain is shipped in bags bought and paid for by the grower of the grain, the latter is no friend to the system, of course. It is the man at the port who exports the stuff in bags, because it is not deemed safe to send wheat twice across the equator to Europe in bulk, who wants the grower to furnish the bag. But last fall the bag cost more than it ever did (12½¢ in some cases), and the Farmers' Educational and Protective Union at Walla Walla has begun a movement to "cut out the bag." It is proposed to agitate for the building of elevators and tanks for storing the grain, and meantime to use a cotton bag instead of the jute sack, so long in use. The cotton sack it is believed can be had by the farmer for 8¢ as a maximum, against 12½¢ for the jute, as the maximum last harvest.

The Wisconsin Grain Commission established a record at Superior and Head of the Lakes, about November 15, by weighing into the elevators 1,169,000 bushels of wheat in 39 hours; and a few days later (18th) a loading-out record of 1,017,000 was made at the G. N. Elevator, which was put into three boats.

debt was extinguished, which took place in 1873, after which the Canal turned into the Illinois State treasury from \$500,000 to \$600,000 before it fell into disuse; and this, too, in spite of the fact that it was operated by the State at a time when "political spoils" were the chief objects of State administration. So that the Canal actually paid its own cost out of its own revenues and a handsome profit to the State of Illinois besides.

The Canal's worst enemy has been its greatest single beneficiary—the city of Chicago. To say nothing of the land upon which the present Cook County Court House and City Hall stand, which was given absolutely by the Canal Commissioners in the 'thirties, the Canal itself was largely instrumental in giving Chicago her permanent start upon her unparalleled course of development. But by 1869 the drainage of the city had begun to be a problem; and then it was that the unscientific but very appealing project of emptying the city sewers into Illinois River to pollute for all time one of the most beautiful of the lesser streams of the West was begun and the "deep cut" made for that purpose, turning the course of Chicago River through the Canal into Illinois. When the fire of 1871 came Chicago had expended about \$2,000,000 on that project, a sum the State generously refunded in the city's hour of need. The deep cut for a time answered its purpose, for the Chicago River automatically flowed "up stream," and all the world was apprised of the wonder.

But the plan was a failure. The sluggish channel began to fill up with sludge, nor was there sufficient water for dilution of the sewage to make

in these days of cheap concrete (and unlimited limestone along its own banks), to replace the present locks between Joliet and Peru (not over ten or twelve) and to widen two short aqueducts, to make a complete waterway that would float a 600-ton barge from the Rock River or Mississippi River to the Illinois and thence to Chicago; and at the rate such work is being done at Panama, it would take about six weeks to complete the entire job! Such enlargement might not solve the "car famine" nuisance; it probably would not, as in the old time, bring to Chicago practically all the grain marketed in the canal counties and even beyond, for farmers will not haul grain very far nowadays for a cent extra per bushel—not nearly so far as once they would, at the time, for example, when Ottawa, La Salle County, in the busy days of the Canal, paid the highest price paid for corn going into commerce and trade by any market town in the world; but such a canal would put a crimp in proposed rate advances on bulk and heavy commodities such as grain, salt, cement, sand, broken stone, etc., all over the Northwest.

But so modest and so simple a way of solving this Illinois waterway problem has had little attraction in these days of business and public works megalomania. Gov. Deneen queered such a movement years ago with his 14-foot channel in Illinois River, with its immense water power scheme, urged by him time after time during the entire course of his administration, on the plea that a big channel was needed to float ships from Chicago to New Orleans and into Panama Canal and that the water-power created by the construction of a canal in Illinois River could be rented to pay all the expense of construction and thereafter yield the State perpetual revenue from power rentals; and this, too, after Attorney General Stead had advised him that that theory was bad law—that the water power rights are easements that cannot be taken from the riparian owners even by condemnation by the State. When the legislature under the hammer of the speaker of the last House, Mr. Adkins, nearly two years ago, refused to appropriate any part of the \$20,000,000 that had been voted by the people of the State on Gov. Deneen's advice for the work of constructing a 14-foot channel in the River, that iridescent dream came to an end, at least for the present. The affirmative vote on a \$20,000,000 appropriation has never been repealed, and Governor-elect Dunne has thrown out some hint of reviving the 14-foot channel scheme, but without the water power appendix, which Mr. Dunne is lawyer enough to know is not attainable by the State, which has no power to acquire the water power rights except by purchase at the owner's own figures. However unfortunate that legal condition may be for the whole people of the State, easements of that character had their origin far back in that past and grew out of public necessities of the past, before modern conditions of power transmission were conceived of; and the common law still protects the owners.

Nevertheless the Canal might be rejuvenated, as certain influential and considerable shippers of grain, salt and cement in Chicago and elsewhere hope, by an appeal made either to the people of Illinois by referendum to vote a sum—a modicum of the \$20,000,000 they once voted in aid of a 14-foot river channel—for repairing the Canal, or to Congress for a comparatively small sum to rebuild the west half of the Illinois and Michigan Canal as the natural complement and logical completion of the Hennepin Canal, which, though lying wholly within this State, was constructed entirely by the Federal Government, which indeed had previously expended large sums on the improvement of Illinois River below Peru by means of locks and dams, which the Chicago Sanitary District trustees have of late years been endeavoring to have destroyed, apparently in order to lessen the possible damages payable by the District, due to overflows caused by the flowage of the Sanitary Canal into Illinois River and over the bottom lands.

The approaching legislature should, therefore, be appealed to to start anew the movement for the rejuvenation of the Canal, which a small sum and

a few years would again make a "going concern," with dockage facilities in the same condition that they were in during the forty years when the Canal was regularly doing business, whereas the river frontage is everywhere owned by private individuals or railroads, which would practically shut in the entire water front of a river channel.

THE BIGGEST EAR ON EARTH.

The illustration is a picture of an ear of corn sixty feet high, made of ordinary ears of corn. It was one of the most remarkable of all the exhibits at the Boosters' Corn Show and Manufactures Exhibition held at Terre Haute, Indiana, recently. Among the other features of the Exhibition were a



CORN COLUMN AT TERRE HAUTE, IND.

coal monument erected by coal operators and a large flag made of corn.

REFORMS IN CANADA.

The Grain Commission of Canada is at work on various reforms that have already become more or less commonplace on this side the line. A scale inspector will be appointed "when a competent man can be found;" elevator inspectors in the country will be appointed who will examine into "the storing and shipping out of grain and the facilities provided by the transportation companies, with a view to arriving at just what are the present conditions, and gain all possible information as to how the grain is being handled in the elevators, and the movement of the cars;" moisture testers will be installed at Winnipeg, Fort William, Duluth, Calgary and Toronto; and later on a system of milling and baking tests of the quality of grain offered for inspection will be made at Winnipeg.

The crop demonstration work of the College of Agriculture of the University of Wisconsin has been conducted on 25 county and state institutional farms during the last five years. Sixty-two field demonstration meetings have been held on these farms with total attendance of 21,500 farmers and their wives. The demonstration fields are placed

near main traveled roads as possible so that farmers passing can see the results of the work during the entire season. The fields are also made the growing and distribution centers for the pure bred seed grains grown at the College of Agriculture. In carrying out this part of the work the pedigree grains are grown in fields along side of ordinary grains. Farmers are thus led to secure these grains because of the better showing they make to the demonstration fields than do common grains.

RAILWAY REGULATION CONSERVATIVE.

Commissioner Prouty in an address last summer at Kansas City declared in substance that railway regulation, whatever it may have been when the commerce act was first put into effect, has become conservation; that is to say, the Commerce Commission has ceased to look solely to the interest of the shipper in its inquiries, but now takes into consideration the interest of the carrier also, and in its decisions and orders aims to strike an exact balance of justice between the two. At the late annual meeting of the National Association of Railway Commissioners Chairman Prouty again expressed the same thought in this way:

The Supreme Court has handed down decisions tending to increase the authority of the Interstate Commerce Commission by enunciating the fact that no judicial body can overthrow a decision of an administrative body, and the opinions of the latter cannot be overthrown when they are based upon careful consideration of the facts presented in connection with the case in hand. That adds materially to the authority and responsibility of the Commission, and this will become true as to State commissions.

There was a time when an Interstate Commerce Commissioner could write in haste any opinion he wanted to write based on any theory he might have in mind, and go home and go to sleep over it, as it was not of any importance anyway. But today, when at one fell swoop \$20,000,000 can be taken away from the earnings of the carriers, you cannot help realizing and feeling the responsibility which goes with the making of that order.

C. F. Staples of Minnesota, delivering the presidential address, called attention to the fact that the railways themselves recognize the truth Mr. Prouty had expressed and added as a logical deduction that there must be a closer alliance between State and Federal regulation and more uniformity. In part he said:

I recall it is but a few years since the representatives of railway companies were expending much time and money to prevent Congress from increasing the powers of the Interstate Commerce Commission. Today the aim of the companies is to secure to the federal Commission complete control. So I repeat that the question, "Who shall regulate?" is not fully settled. I do not believe we can justly criticize the roads for their attitude. There is a fault, and the remedy is in our hands. As long as you have several States studying to see which can outdo all others in radical and antagonistic regulation, the roads are justified in complaining. What we need is more co-operation among States to the end that the greatest possible uniformity in all matters be accomplished, and in all matters where it is possible there should be co-operation with the representatives of the railways.

As a partial remedy he offered the following suggestion:

I want to suggest to this meeting the consideration of the question of having all the States join in maintaining at Washington a common agent to represent the various commissions in all matters affecting interstate questions. I believe this is practical, will cost the several States but a small sum each, and will prove to be a great benefit if given a fair trial; also, that it will prove a means of effecting a closer co-operation between the different authorities.

WAGNER ON CORN.

E. W. Wagner has issued a special circular on corn. He believes corn is at a level that will attract capital. He says in part:

A record corn crop is a drastic farm happening—a bombshell on the farm. It means record—hurry, work and hustle around the feed lots and the crib. The crop must be harvested and consumed. Three billion one hundred and sixty million corn obviously would overwhelm the terminals, if feeding be neglected. It means rustling, for feeders and for live stock. It means telegraphing, motoring, bidding.

Cheap corn will shake up the farming belts more completely than any other happening. It means recreation—a return to cattle and hog raising lore. Bulging corn cribs force the farmer to "sweat"; to remember the 20 per cent depreciation in cattle and 15 per cent decline in hogs in the last five years; to remember that Europe will take his last and every pound of bacon and beef.

A 3,160,000,000 corn crop is an alarm at the farmer's bedside that will ring for a twelvemonth.

I. H. C. A PROMOTER.

The International Harvester Co. has joined team with Sears, Roebuck & Co. and will invest \$1,000,000 in a crop betterment campaign. The plan is to do these things:

To use its 42,000 agents throughout the United States for the distribution of improved seed, scientific farming literature, etc.

To broaden the corn belt and to raise the average production per acre.

To educate the corn belt farmers to the value of alfalfa and to furnish experts in its culture.

To run seed corn specials, alfalfa specials and diversified farming specials in every state of the Union.

To go from county to county in automobiles, lecturing and demonstrating wherever ten farmers sign a request for such service.

To offer farmers the services of an organizer to build up social and farm improvement societies.

To demonstrate the advantages of consolidation schools in place of the small country schools, making it possible to teach scientific farm methods.

To establish demonstration farms in addition to the three now in operation in the South.

To show "boll weeviled" cotton growers and "wheated out" North Dakotans how to get started with other farm crops.

To help secure and maintain county crop experts to serve farmers.

To organize dairy testing associations.

To furnish tested alfalfa, corn and other seed.

The general supervision of this work will be in the hands of Prof. P. G. Holden, a man who is known wherever agriculture flourishes, whose life has been devoted to this great industry.

[For the "American Elevator and Grain Trade."]

THE RICE AT THE WEDDING.

BY GUIDO D. JANES.

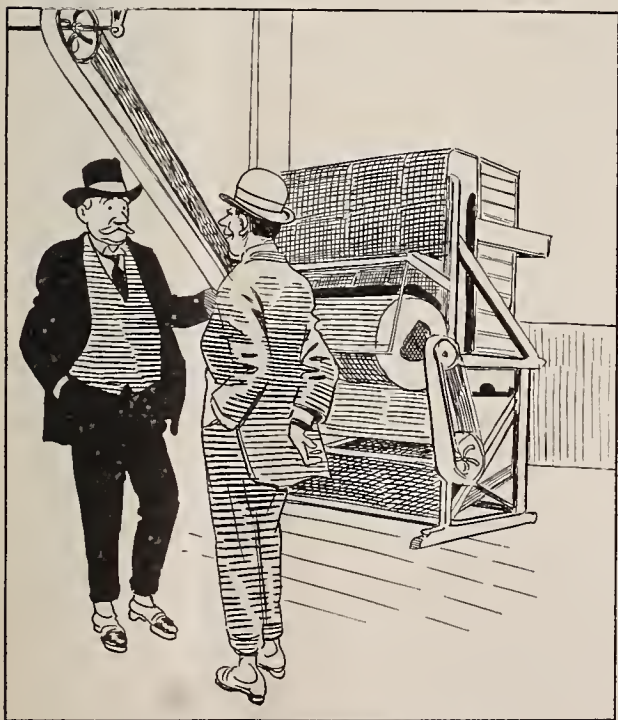
The elevator foreman, Hubbard, had to laugh twice before he could say anything; he had to double up on the scale floor and suppress his mirth. After that he said that he could beat the boss to it.

"How so?" demanded the perplexed deputy board of trade scale man, Shultz. "Murphy said there would be no rice throwing at his wedding—that rice at a grain dealer's wedding was unconstitutional, and that he would fire any of his hands who indulged in the said throwing."

"That's just it. Haw-haw!"

"Well, that's just not it," retorted the deputy, still perplexed. "The wedding, both at the parsonage and afterwards at the house, is private, and we poor suckers, after chipping in for a wedding present, don't git no invite to the affair."

"Your arguments are wrong. He left us out in the



"WELL, THAT IS JUST NOT IT."

cold for an object, and if we make good it will please him. There was a 'Rye House' plot in history; there will be another one at present in a grain elevator; and we will deluge him with rice from the time he leaves town here till he gets into Chicago in the morning."

"Put me wise."

"Sure. Here it is. Murphy our boss owns a

string of elevators all the way from here to Chicago. I know most of the foremen and you know the deputies. Will you do as I say?"

The perplexity in the deputy's face wandered off, and a light of suspicion asserted itself. "I see your game, Hub, and it's a peach. You intend to shower the boss with rice *via* the car loading spouts all the way from here to Chicago?"

"How did you guess it?"

"Instinct," returned the deputy, "instinct. But how you are going to turn the wheat into rice? I ain't wise to that."

"Dope it up with whitewash."

"You got sense. I kin see that."

"Thanks," laughed the foreman. "But we have no time to waste in throwing green house goods or bouquets at each other. The wedding is in two and a half hours, and the train leaves in three hours and a half. Meanwhile we must pass the word along the line and give the boys plenty of opportunity to prepare."

"Ah," cried Shultz suddenly, "who is to pay for the wheat and th' trouble?"

"The boss, provided the scheme works. He will be as tickled as we are, and gave his consent by condemning all demonstrations. I know him, I tell you, like a hook."

"All right, you been workin' for him longer as I have and know."

"So the two elevator men got husy at once. Procuring some whitewash and a couple of bushels of 'no grade' wheat they doped it up with the whitewash and converted it into humorous rice. This being done, they placed the stuff in close proximity to the car loading spout. After which they passed the word along the line by the telephone to get busy and deluge the boss with the unexpected."

"Who is back of the game?" inquired Hugh McCarty, the foreman at Brasher.

"Me, Hubbard; I guarantee it all, provided you guys do your duty."

"That's sufficient, then. I will shower with rice Murphy et al. whin they come through on the Limited at ten-thirty. I will pass th' word along to th' rist of the bys. So long."

"So long."

All this time Murphy, proprietor of the string of elevators, was getting dressed ready for the affair. He had risen from the ranks, and now owned a wad of money; and when the wedding came on and there were no signs of pranks on the part of his men, his face dropped into a silent sad mood. "Just loike it," he mused to himself. "Whin a mon gets spliced, and wants th' woorld to know it, an' feel happy, along comes the hearse dhriver and lheaves a bunch of sorrow. I tole Hubbard and the rist that I mint to have no rice tossin', but I jhust sid so in orhder to git the more showers. If there—"

An interrupting voice here broke up his talking. "Are ye ready, Murphy? Th' bride is waitin' down stairs fer yez. And Father O'Tummey is sojournin' at the parsonage in waitin'. Are you dhressed?"

"Not bein' a loafer on the job, I am dhressed. Till the bhride I am comin'."

So with a forced smile upon his face, he opened his door, sallied forth, met the bride with another forced smile, and together they piled into the carriage and were driven to the parsonage. Reaching there they got out, and at once Murphy broke out into a genuine laugh. It was only for a moment, however; for seeing Hubbard and Schultz and others of his elevator men collected on the sidewalk to see him and getting next to the fact that they were not going to shower him with rice or shoes, he dropped his wrinkled face into a bunch of scowls.

"What did I tell you?" said Hubbard to Schultz, as the two caught the expression upon their boss' face. "He was expecting something from us and did not get it. That proved I am in the right. But come now, and let's hurry to the elevator, for we have but three-quarters of an hour to work our end of the deal."

"All right, I'm with you."

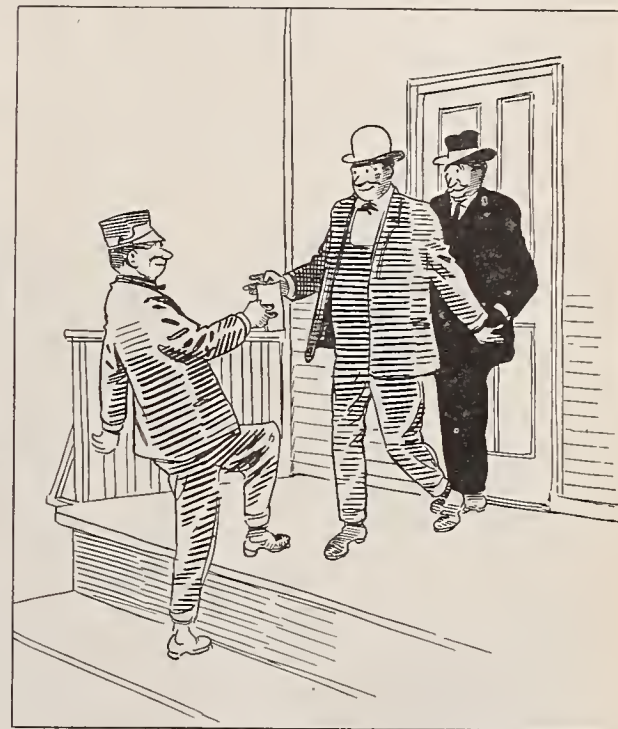
The two now hurried back to their place of business, got the stuff ready to spout out upon the passing train, and had only three minutes to wait when with a rush of wind and a multitude of din, the

evening passenger train for Chicago shot by the elevator. It had already gathered speed, after pausing at the station, as it passed the elevator; but Hubbard gauged the rushing monster properly and set the car loading spout in operation at the psychological moment.

"How did it work?" yelled Shultz, even before the decreasing noise had died away.

"It could not have worked better," replied the foreman. "I deluged all the cars from the baggage to the sleeper. Now let's wait to hear the return from the rest of the boys. He will be pleased and no mistake, when he gets wind of what is up. If there—"

"Wait," he added, changing the subject. "There goes the telephone. Hello. Yes, this is me. How did the game work? [Pause.] Glad to hear it. He



"TELEGRAM FOR SAM HUBBARD."

was awful blue when he left and no one was cutting up shines. Yes, tell me the news when you get it."

"That's from Hi Armstrong, the manager at Ricker. He said he threw three bushels at the bride and groom, and if they did not know it, they must have been deaf." And Hubbard sat down in the office chair and laughed several laughs. Shultz joined in toward the last. Soon the hell rang again. It was from Armstrong with further returns from the rice throwing campaign. He reported that the foremen both at Eubanks and Coatshurg had gotten busy and that Murphy was on the rear of the observation car, covered with smiles. Mrs. Murphy was there, too. It was midnight before either Shultz or Hubbard was aware of the fact, but they were so excited with the fun that they had no thought of leaving, and the early gray of dawn began to steal up in the east before they thought of quitting the place.

"Let's go," suggested Hubbard with a yawn. "I am tired but supremely happy."

"So be I. I kin sleep pretty fine afther I git a drink down at Schroeder's place. Gosh, I had the time of me life!"

"So did I, and I bet a farm that Murphy did too. In fact, it was an all around good time, and if— There comes a messenger," he added, changing the tone of his remarks. "And I bet it is a telegram for me. Who is it to?" he cried, going to the door; followed by Shultz. The messenger hoy dismounted from his wheel and met the two as they closed the office door and were on the porch leading to the sidewalk. "For Mr. Sam Hubbard."

"That's me." And tearing open the message he read it with many smiles. "Listen what he says, Shultz: 'Dear woork hands: The game oiv turning wheat into rice and showering same upon me and Mrs. Murphy was will taken. In fact, so will takin' that I will raise the wages of all that had a hand in it. Both bhride and groom oir will as could be expictid. MURPHY.'"

John Seethoff, Jr., of Burns, Ore., has gone out of the milling and grain business.

QUAKER OATS ELEVATOR.

The Quaker Oats Company is enlarging the grain storage capacity of the plant at Cedar Rapids by the erection of a steel, hollow tile and concrete elevator to cost approximately \$80,000. This building, located on what was formerly C Avenue, will bring up the total storage room of the plant to 1,250,000 bushels.

The new house, which is being erected for the company by the Barnett & Record Company of Minneapolis, under the personal superintendence of O. A. McQueen, will have 40 bins, each 12 feet in diameter by 95 feet high, with 27 interstitial bins, giving a total of bin capacity for 400,000 bushels. The working house will be connected by conveyor gallery extending over the roofs of the mill and grain cleaning department with the elevator now standing on B Avenue, where the grain to be placed in the new elevator will all be unloaded from the cars. Two belt conveyors will be placed in this gallery, one of which will carry the grain to the new elevator and the other will return it to the receiv-

about 400 acres, is one of the largest of these lakes and it varies in depth from 30 inches to dryness, according to the rainfall and season. Analyses of the water and mud suggest that extraction of the crude salts or of the potash and by-products might be profitable.

In Nevada the potash supplies are more encouraging; for at Silver Peak Marsh in the Goldfield-Tonopah district, extensive areas were found that yielded some springs with 3.43 to 3.80 per cent of potash. The salt supplies in this district are calculated at 16 million tons within forty feet of the surface.

A COMMON HAZARD IN MILLS AND ELEVATORS.

A report by the Mutual Fire Prevention Bureau on a recent fire in the elevator of the Claflin Grain and Fuel Company at Claflin, Kan., calls attention to a hazard that is common in elevators and undoubtedly exists in many mills. In this instance the damage was not great, but under slightly dif-

[Wall Street Journal.]

CHEAPER MONEY TO FARMERS.

FARMERS ARE NOT PAYING MORE FOR MONEY THAN ARE OTHER BORROWERS—CAN THEY GET IT?

BY HARRY L. TAFT.*

A low interest rate is an unquestioned advantage to any borrowing class, but more important after all than the mere rate is the credit possibility itself. Disabuse your mind of the false impression given you that the farmer is paying any more proportionately for the money he obtains than is any other class of borrowers. He is, in fact, borrowing today at a lower rate of interest than any business man in his own community.

If you assume that the average rate on the mortgage indebtedness of the United States is 8 per cent (the figure at present widely circulated), you start with a misleading assumption. In the newer and undeveloped States that rate will rule, and legislation cannot correct the underlying weaknesses that account for it. But those States which because of their vaster credit basis add the greatest percentage of the whole mortgage debt are almost in every instance paying around 5 per cent. These rates are not only lower than those accorded merchants in the same communities, but considering the unliquid character and long-time nature of the farmer's paper, the rates must be regarded as decidedly favorable. A comparison of these figures with those at which good corporation paper, good railroad bonds, or short-time notes may be had will reflect decidedly to the advantage of the farmer and his sources of supply. Considering the difference in rates of interest that obtain in all classes of investment in Europe and the United States, the rates paid at present by our farmer in reality compare favorably with the lower rates paid by European farmers.

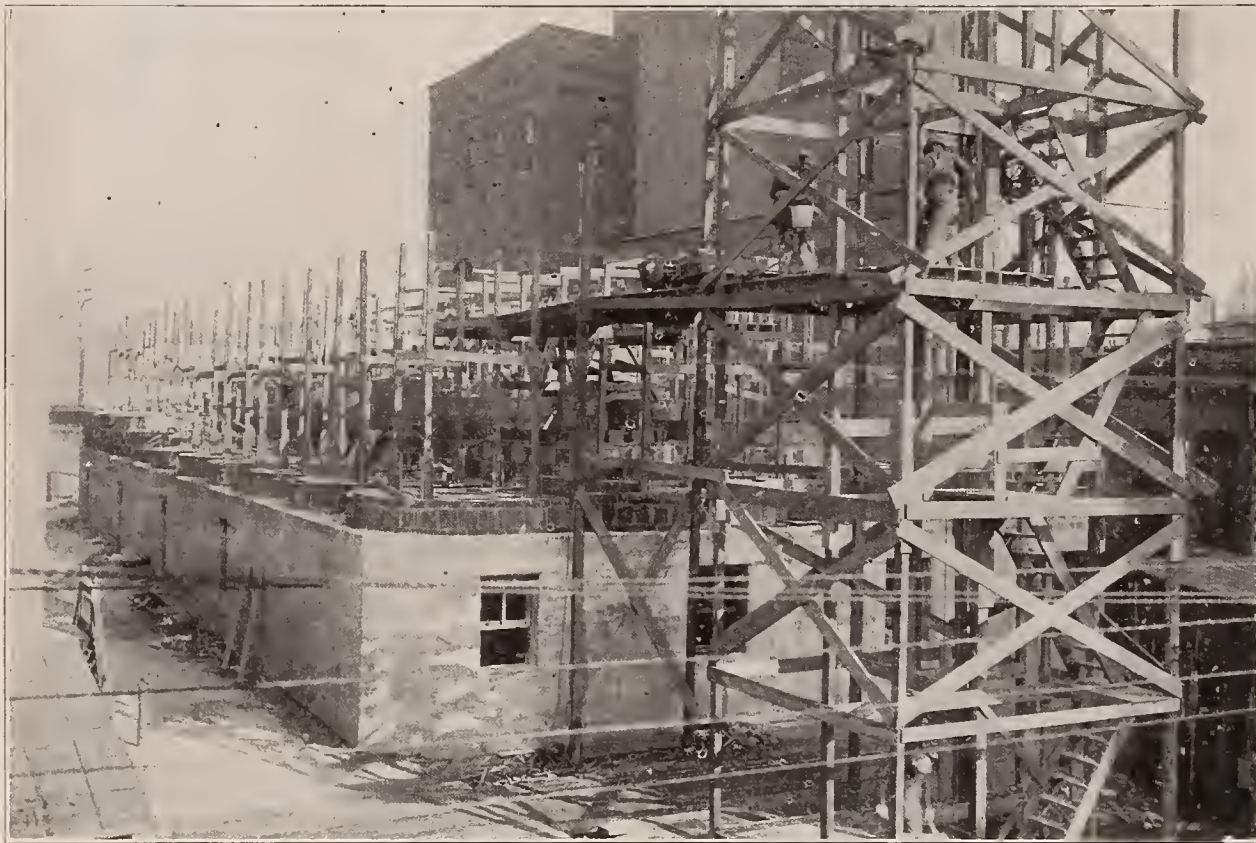
So long as high grade bonds can be purchased on an income basis of 4.75 to 5 per cent, it is difficult to understand from what source or by what means capital can be tempted into an enterprise intended to serve farmers at lower rates than these, unless it be accomplished, as in Germany, by means of a government subsidy; and it should be kept in mind at this point that in the European practice the profit to be charged by the banks handling the government subsidy is limited to a maximum of ½ per cent per annum. A profit of this nature could scarcely appeal to private capital in a country as full of opportunity as ours, and an attempt to collect a larger profit would defeat the ends in view. The American people have repeatedly gone on record as opposed to the principles of subsidy, and I doubt their readiness to consider it favorably now in connection with a necessity such as this is said to be.

In our own country the important lenders on farm mortgage security are the large insurance companies; they hold approximately \$700,000,000 of this paper and their net rate of interest is close to 5 per cent. Their experience with these loans has been uniformly satisfactory; they will not readily abandon this field of investment to any form of competition, and yet if competition with them is to be successful and no larger collection than the ½ per cent mentioned is to be gained by the promoters of the new enterprise, a rate must be accorded the borrower so low as to become philanthropic rather than commercial.

If the same regard for security and safety that has made this paper desirable is to continue, competition must center in those older established States where rates are already so low as to leave but little to be desired in that respect; and if the newer venture contemplates entering those undeveloped, unproven regions, will not capital then, as now, demand a rate commensurate with the risk and uncertainty or refuse to follow? Unless it will follow, our plans come to naught; and if it is the rate that tempts, are we not again back to the present conditions?

Our present banking facilities are furnished by approximately 27,000 institutions having no relation to each other and each serving its own community and its own customers in its own way and according to local necessity. I repeat here—for it

*From an interview in the Wall Street Journal with Harry L. Taft of Chicago on agricultural credits.



ELEVATOR FOR QUAKER OATS CO., CEDAR RAPIDS, IA., UNDER CONSTRUCTION.

ing elevator to be distributed from there to different machines of the cleaning department. This bridge will be forty feet above the roof of the mill building proper.

The new structure will, of course, be entirely fire-proof, the bin walls being of hollow tiles resting on reinforced concrete. Although the work has been somewhat delayed by inability of the contractors to secure deliveries of materials, the building will probably be completed by February 1.

POTASH FINDS IN U. S.

Since the action of Germany in relation to the export of potash, which has threatened American supplies, the Geological Survey has been searching, quite successfully, for American sources of supplies. Some of these possible sources are surprisingly unexpected; as, for example, the discovery of soluble potash salts in certain lakes of western Nebraska. There are in that part of the country many shallow lakes nestled among the sand hills, that are from 50 to 500 acres in extent, and are of varying depth. At the ordinary stage of water most of these lakes have no surface outlet and some of them are apparently underlain by impervious strata, which prevent the escape of the water by seepage. As a result they form shallow evaporating pans in which large quantities of the alkaline or saline material of the tributary drainage water accumulate and become more or less concentrated.

Jesse Lake, situated in T. 25 N., R. 46 W., covering

ferent conditions the loss would have been a heavy one.

The main drive shaft runs through a bin (the largest in the elevator) having a capacity of about 8,000 bushels. The shaft was supposed to be protected from the action of the grain by a wooden housing, but under pressure of practically a full bin of wheat the housing gave way and the shaft broke. At the time of the break the exact condition was not known and it was supposed that the shaft had crystallized and broken. But when the owners of the house were ready to install a new shaft, a few days later, a serious state of affairs was discovered.

When the pieces of the old shaft were removed it was found that the unexposed portions were too hot to handle and that close to the break the ends of the shaft were highly discolored and intensely hot. It was evident that the shaft had been red hot and had twisted apart close to the middle of the bin. It was apparent that there was fire in the bin and steps were at once taken to empty it.

After a portion of the contents had been removed, damaged wheat began to run and when the level of the shaft was reached chunks of black, charred and smoking grain aggregating about 20 bushels were removed. It was then seen that the wood protection (?) of the shaft had been burned completely in two, but as there was no available air supply it had been smoldering and converted into charcoal. The wood had given way and forced the casting against the shaft, which soon became hot, and the heat was communicated to the wood and adjacent wheat.

is important not to lose sight of the fact—that these banks have served their communities well and satisfactorily, have rendered them all reasonable facilities, and not at exorbitant cost, as compared with the cost of our commercial activities in other lines. Seldom has a good borrower with acceptable credit or collateral been obliged in normal times to go without funds for either short or long time use.

The formation, as proposed, of societies similar to the Raiffeisen will in exact ratio to their size and success take from our present country banker that most profitable portion of his business, the local short-time loans; and the establishment of the larger or mortgage bond societies will take from him the greater portion of his present income from the farm mortgage source.

We can see a decided advantage to the farmer in obtaining money cheaper, if possible, but can discover nothing in the prospect to tempt capital to offer him money at rates decidedly lower than can be obtained through other desirable channels; and we question the desirability of upsetting the present country banking system.

PERSONAL RESPONSIBILITY IN FIRE HAZARDS.

That every fire, at the start, is a question of personal responsibility of some one is the text of a circular letter recently issued by Wm. Reid, secretary Mutual Fire Prevention. He calls attention to the fact that every year when the first cold spell commences the country suffers from an epidemic of fires, owing to carelessness or thoughtlessness or perhaps laziness in failing to examine carefully the heating apparatus, the flues and everything connected therewith.

In order to emphasize the importance of personal responsibility the Bureau has prepared a set of rules, in the form of pledges, which is being mailed to all policy holders. Following is a copy: PLEDGES FOR THE PROTECTION OF MILLS AND ELEVATORS.

- I WILL NOT permit rubbish, rags, paper and useless waste to accumulate in or around buildings.
- I WILL SEE that kerosene oil is kept in closed metal can in a safe place.
- I WILL NOT permit gasoline to be kept anywhere but in an air tight metal can, protected and located proper distance from buildings and will not allow the handling of it by artificial light.
- I WILL HAVE the chimneys, stovepipes and stoves inspected at least twice a year. I will never permit a stove to be set up without stone, concrete or metal protection underneath.
- I WILL NOT have steam-pipes in contact with woodwork or near inflammable materials, and will not permit rubbish to accumulate behind radiators or steam coils.
- I WILL NOT hang clothes or bags near stoves, or on stove-pipes or steam-pipes.
- I WILL NOT permit the use of any movable open lights, or open light of any kind in a dusty location.
- I WILL NOT destroy the insulation on flexible electric light or fan cords by hanging them on hooks or nails.
- I WILL NOT allow oil to get so low in kerosene lamps, that explosive gas may be generated and will see that lamps are filled by day light only.
- I WILL NOT allow oily waste or rags to be thrown on the floor, but will keep them in approved self closing cans during the day and at night remove them from the building, as they are self igniting.
- I WILL NOT allow matches to be kept in paper boxes, as metal or earthen safes are much safer.
- I WILL NOT smoke on the premises or permit my employees to do so.
- I WILL NOT fail to have water barrels and buckets filled, distributed and placed in conformity to Rules of the Millers' Mutual Fire Insurance Companies.
- I WILL NOT fail to test periodically, the hose and fire appliances.
- I WILL AT ONCE spend a little time in removing the known causes of fire. Procrastination may cause a conflagration. It is easier to prevent fires than to extinguish them.
- I WILL NOT FORGET—that NEGLIGENCE AND CARELESSNESS are the cause of more FIRES than all other things. IT IS BETTER TO BE SAFE THAN SORRY.

SOYA BEANS IN EUROPE.

The English oilseed crushing industry used during first nine months of 1912 134,801 tons of soya beans, against 136,685 tons same period of 1911. At the same time (1912) the mills crushed 442,266 quarters of linseed (403,787 quarters in 1911) and 202,094 tons of cotton seed (202,448 tons in 1911). Of rapeseed only 75,748 quarters were used in nine

months of 1912, against 129,780 in same period of 1911. The demand for cake has been weak.

In Germany, although the soya bean is largely crushed at Hamburg, there is only a slight demand for the cake from cattle feeders, it being the German practice to feed under cover, giving the cattle but little exercise. The soya cake is therefore inclined to cause digestive disorders. In Denmark, on the other hand, Consul Skinner reports from Hamburg, the demand for the cake is increasing, because there the cattle are let out to graze.

YIELDS HERE AND IN EUROPE.

The accompanying cut, for which we are indebted to the "Indiana Farmer," tells a story and points a moral. The story is that European farmers have taken hold of their barren and worn out land and by scientific methods have produced from it from 25 to 50 per cent better yields per acre than our American farmers are getting from their fields.



COMPARATIVE GRAIN YIELDS.

The moral, to the American farmer, is "go thou and do likewise." Scientific rotation of crops and proper, systematic fertilization are the methods to employ. They have done wonders in "bringing back" the old farming sections where they have been tried; they will do the same everywhere.

The grain dealer, particularly if he be located in the country, can do and is doing a great deal in preaching to the farmer the gospel of better farming methods. Every elevator, be it large or small, should be an active factor in preaching the gospel of "more and better grain." The dealer is vitally interested, and he can do a great work.

SOUTHWESTERN KAFFIR.

The Kaffir corn harvest in November in the Southwest was rather larger in volume than a year ago, averaging about 25 bushels per acre. The outturn has been so encouraging that a larger acreage is predicted for next year.

In Oklahoma in particular, the agricultural commissioner of the Rock Island System has done much to create interest in this crop, and his work in that direction will be continued this fall in a special way. On November 25 a "Kaffir Special" will start for a tour of the lines of the company in the State, and at the stops experts in Kaffir culture will give lectures. The train will be out until December 10,

starting from Oklahoma City. The Grain Dealers', State Bankers' and State Millers' associations will assist in the publicity work necessary.

It is not now known how many bushels of Kaffir have been produced this year in the Southwest, nor will it be until the State authorities make up the totals of all agricultural products grown therein, but it is known that large numbers of live stock are being fattened on the roughage and grain of Kaffir; and it is said that during the progress of the "Kaffir Special" through the state, the representatives of the bankers will explain that owing to farmers' past neglect to grow fodder, the bankers have not felt justified in granting to them full credit facilities, and that only those who regularly plant fodder crops and Kaffir are or will be likely to be able to obtain funds from financial institutions for their temporary needs.

This will be the first time in the history of Oklahoma that the bankers have traveled over the state

to have a close contact with farmers about matters pertaining to agriculture.

LAWS PROPOSED FOR MINNESOTA.

Representatives of three sectional development associations in Minnesota met at the Nicollet Hotel, Minneapolis, on November 22 to discuss two bills to be offered the next session of the legislature for enactment. One bill is a pure seed bill; the other is a bill to enable counties to expend money to aid the better farming movement.

The pure seed measure is designed to prohibit the sale of all but pure seed, or to require that all seeds offered for sale shall bear on the label a list of the actual constituents of the seeds.

The permissive law, as discussed, will allow county commissioners to appropriate money to put into the field county agricultural directors. "It takes from \$2,000 to \$2,500 a county a year for each of these directors," said Secretary E. C. Higbie of the West Central Minnesota Association. "The Government, the extension department of the University and the Council of Grain Exchanges are now contributing to this work and \$1,200 is raised in each county for the work. The proposed bill will permit county commissioners to appropriate up to \$1,000, so that the work will not depend on subscriptions."

[For the "American Elevator and Grain Trade."]
**REQUIREMENTS OF STATUTE OF FRAUDS
 IN SALE OF PART OF QUANTITY
 OF GRAIN.**

BY J. L. ROSENBERGER,

Member of the Bar of Cook County, Illinois.

In an action brought to recover \$975 as the purchase price of 1,500 bushels of corn, the plaintiff said that he had 2,000 bushels of corn in a crib on his farm when he met the defendant and sold to him 1,500 bushels of the 2,000 at 65 cents per bushel, the defendant to have up to and during the month of July to remove it, and that defendant was to go to the plaintiff's crib and see the corn, and leave word at the plaintiff's house if it suited him. The defendant then went to the plaintiff's premises and looked at the corn in the crib, and left word that it was satisfactory. The corn was to be weighed on the defendant's scales as he hauled it to his place. The month of July passed without the defendant taking the corn away. On one or more occasions after July, the plaintiff told him that the corn was his and at his risk. The plaintiff fed stock out of the corn from time to time, but did not reduce the quantity below the number of bushels sold to the defendant. The plaintiff had all the corn in the crib insured in his own name up to the 7th day of August, and the defendant, learning that the insurance was about to expire, had it extended, in the plaintiff's name, for 30 days. Two days after the extended insurance expired the corn was burned. No money was paid on the price, nor was there any writing.

In reversing a judgment rendered in favor of the plaintiff, the Kansas City (Mo.) Court of Appeals says (Ficklin vs. Tinder, 143 Southwestern Reporter, 853) that the question for decision involved the construction of the section of the Missouri statute of frauds which requires, for a valid sale, in all cases where there is neither writing nor part payment, that "the buyer shall accept part of the goods so sold and actually receive the same." It is true that some articles of personal property are of such a nature that they cannot be delivered by a manual taking hold. A familiar illustration is where the grain in a warehouse is well delivered by a delivery of the key and a surrender of dominion by the seller and acceptance of dominion by the buyer, but this surrender of dominion by one and acceptance by the other is a vital necessity. Both the acceptance and surrender of dominion must be unconditional; therefore, if the seller could refuse to let the property be taken unless the purchase price be paid, the statute of frauds has not been satisfied, for that claim would show that actual delivery, in point of fact, had not been made. So it may be said that an assertion of a vendor's lien for the purchase price is inconsistent with the claim of compliance with the statute. The test for determining whether there has been an actual receipt by the purchaser has been to inquire whether the vendor has lost his lien.

In this case nothing was said about when the price was to be paid and we must assume that it was for cash. In such instance the seller may refuse to deliver unless the price is first paid. That fact would disclose that the seller retained dominion over the property until the price was paid, and therefore there could be no such delivery and acceptance as will satisfy the statute.

Neither can there be a surrender of dominion by one and acceptance by the other when the property is an unascertained part of a general mass or bulk. So, therefore, until there has been a setting apart, or separation, of the part sold from the remainder, there cannot be compliance with the requirement of the statute. This rule was alone sufficient to defeat the plaintiff; for the corn sold was only a part of a larger bulk in the plaintiff's crib; the number of bushels to be ascertained by weighing; and this was never done.

It is true that a sale may be complete when there are yet things to do in connection with it, such as counting, weighing, or measuring. But that is where the whole bulk is sold, say, at a stated price per bushel or pound, the measurement or weight to

be ascertained to fix the total sum due; as, if the plaintiff had bargained his entire crib of corn at 65 cents per bushel, the number of bushels to be ascertained.

The court does not see that the plaintiff's declaration to the defendant that after July the corn was at the latter's risk and that he thereupon had the plaintiff's insurance on the whole bulk extended, could avoid the law as it has stated it. It was no more a recognition of a purchase than he made when he entered into the original contract. The facts remained that he never took possession of the property nor could he do so until it was separated from that which it was a part.

The court's attention was called to a class of cases where it is held that replevin may be maintained for the plaintiff's part of a larger mass of grain, if all of the same quality, and that a separation was not necessary. But those are cases where title and right to possession of a part was in the plaintiff. A party already the owner and entitled to a certain number of bushels of grain in a bin, a part of a greater number, may take it by replevin. But, under the statute of frauds, he does not become the owner and entitled to take it until there has been a separation. In this instance of replevin, the plaintiff has become the owner of a part in some lawful way and he may bring replevin. But the very question for decision, under the statute of frauds, is, has the buyer become the owner?

It is also well to call attention to the distinction between a delivery which will be sufficient to pass title if the contract otherwise complies with the statute of frauds and a delivery and acceptance which is alone depended upon to validate the sale. For even though there is a parting with title, there may not be a parting with possession; and the latter act is necessary to a valid sale under the statute.

TRANSIT RULES DISCUSSED.

In opinion No. 2042 (Docket No. 3002) entitled, "The Transit Case," the Commerce Commission, by C. C. McChord, Commissioner, sharply criticises the transit rules in force in the Missouri River-Northwest territory, which are characterized as subjecting the carriers in these sections to "well-merited criticism." The decision has reference to the relations more especially of the millers of the Northwest with the carriers of that section, but the principles laid down are of course of general import.

The Commission, in a report dated June 5, 1912 (24 I. C. C. 340), order dated August 15, 1912, directed all carriers under its jurisdiction to establish and maintain transit rules for the purpose of policing and regulating this service in interstate commerce. In the C. F. A., Southeastern and Mississippi Valley territories the rules made by the carriers are such as to cause no complaint; but in the Missouri River territory and in the territory northwest of Chicago, Commissioner McChord says, "the policing of transit tonnage is an absolute hardship upon the shipper. Instead of reporting to one inspection office, a grain dealer or miller is compelled to report to each particular carrier, and upon forms or blanks peculiar to such carrier. . . . One miller, whose tonnage was handled by four different roads, was required to make approximately 60 reports each day."

Such a condition calls for relief; "and where efficient transit bureaus are in operation but a single report to a transit inspector is required." The Commission has recommended the establishment of such bureaus, as a means for simple, uniform and efficient policing of the tonnage, for daily reports are called for only of grain accorded the transit privilege; that is to say, if any part of the wheat, say, handled by a house is accorded transit, then the report is "essential as to all wheat, whether transit or nontransit, handled by that house." When a house handles no grain in or out on a given day, a duplicate report for the day previous when grain was handled is sufficient.

As to the complaint made that the Commission's order requires that too great a percentage be deducted to cover the loss incident to the drying of corn, Commissioner McChord says:

"The order makes no final arbitrary deduction, but specifically provides that the actual outturn of the grain shall be credited to the miller in his transit account not less than four times a year, quarterly, leaving it optional with the miller and the carrier to make the actual balance monthly, weekly or daily as the exigencies of the particular case require."

Nothing was said in the order in connection with the drying of wheat. It appears that some wheat is of such a character that it is necessary to subject it to a drying process, thereby entailing a loss in weight. The loss can be taken care of by making the proper deductions at the time of balancing the tonnage account, not less than four times a year, quarterly.

Where, after cleaning and the removal of screenings, grain that has become mixed, as in planting and harvesting, is put through a separating process, it was found that the policing authority could ascertain from the records the actual results of the separation, and could credit the grains as separated against representative billing, permitting shipments to move out properly described.

The remainder of the opinion has reference only to the matter of identity of billing. In the case of transit accorded to grain blended in the milling process, wheat is governed by the Paul P. Rainers tariff, I. C. C. No. 209, subsection (b), that requires the billing to be surrendered at the same ratio as was observed in blending.

WINNIPEG SAMPLE MARKET.

The purpose of the Canadian Grain Commission to create a sample market at Winnipeg seems to be a fixed one; but the difficulties in the case are those connected with the handling of grain cars at Winnipeg, while the elevators to which the grain is destined are at the head of the lakes in Ontario. The railroad men in general oppose the project because of its probable interference with the movement of grain through Winnipeg on its way to the elevators. The Commission responds that the samples may be taken while the cars are in transit from the West, and sent to the city and the sample tables by express, and in that way avoid the anticipated delays.

The railroad men said there is yard room at Winnipeg now for 4,000 cars per day in and out and extensions are under way to increase the facilities to 6,000 per day; yet so enormous is the movement of grain through the city that while the plan is that the farmer must have the right to allow his grain to remain in Winnipeg for a minimum of 24 hours, if a Sunday should intervene there would be a lay-over of 48 hours, and if there were also a holiday on the Monday there would be an interval of 72 hours, making conditions that the C. P. Ry. at least could not deal with.

Andrew Kelly, president of the Winnipeg Grain Exchange, said that so far as the producer is concerned, there is no other method than the sample market whereby he can get the full value of his wheat. So far as the delay and congestion in Winnipeg is concerned, he did not think there is much in it. All the grain would be delayed for one day and the movement would then proceed as usual. It would be just one day behind.

Considerable discussion took place with reference to the period of time which grain cars spend in Winnipeg under the present system. Dr. Magill stated that he had in his possession a list of 160 cars. These cars had been shipped from Alberta points, and they had been on the road from 40 to 160 days before they had reached their destination. He believed that he could find several hundred additional instances. Cars are held plenty long enough under the present system to provide for the establishment of a sample market. The condition to which he referred has not been a circumstance of a single winter, but is characteristic.

New Orleans in November exported 2,007,150 bushels of wheat, all but 81,150 (to Latin America) went to Liverpool and continent—most of it to Europe. Of 175,250:60 bushels of corn exported 105,836 bushels and all of the 38,240 bushels of oats went to Latin America.

An inspector of the C. & N. W. Ry. Co., trying to find out what becomes of grain doors in South Dakota, is said to have discovered that a number of sheds and other buildings are built of lumber which has a striking resemblance to the lumber used in making grain doors. Arrests may result.

[From Annual Report.]

AGRICULTURAL CREDIT: SURVEY OF LOCAL CONDITIONS.

BY HON. JAMES WILSON,

Secretary of the Department of Agriculture.

Agricultural credit is a subject that is attracting much attention and exciting a great deal of discussion. The information with regard to what has been accomplished in co-operative credit and in the service of great mortgage banks under governmental supervision must necessarily be derived almost entirely from foreign countries. In addition to this, little is known in regard to local conditions in all parts of this country pertaining to agricultural credit. In view of the possibility of legislation concerning the subject, and more certainly to provide information useful in discussion, the effort was made early in the autumn to collect data of a descriptive sort.

A schedule of questions was sent to 9,000 persons in all of the rural counties of the United States. There were about 3,000 country bankers, about the same number of prominent farmers, and also about the same number of country merchants and men of other occupations taken from the list in use by the Bureau of Statistics to collect monthly reports of the prices of farm commodities. It thus appears that the whole country was thoroughly covered by the schedule. The nature of the questions will appear upon examining the tenor of the answers.

Three classes of correspondents were chosen, in order that if any class bias appeared it would be recognized and allowances made for exaggeration or deficiency of statement. It was hardly discoverable that class bias entered considerably into the answers given. Where differences appeared among the classes of correspondents they were probably quite as much due to differences of thoroughness of information as to bias, and perhaps differences in point of view influenced the answers. At any rate, the three classes of correspondents reported remarkably well and intelligently and no doubt with faithful and sincere desire to contribute to a truthful description of local rural conditions bearing upon credit.

The questions were so worded as to call for answers in numerical form in order that they might be consolidated and treated arithmetically. A set of tabulations was given to each class of correspondents and also the three classes were combined after it was observed that the differences were not usually too great to be harmonized. Probably on the whole the combination of the returns from the three classes of correspondents into one set of results is often nearer the fact than is indicated by any one of the three classes. However that may be, the chief results of this investigation are herewith presented with the hope that they may be of service.

SECURITY.—The first effort of the inquiry was to ascertain the fraction of the farmers owning their land who are able to give good security or indorsed note for a loan. In the opinion of the correspondents, 77 per cent of the farm owners may be so regarded, and the corresponding percentage for tenants is 46; that is to say, about three-quarters of the farmers owning their land and nearly one-half of the tenants are able to give good security or indorsed note for a loan. The farm owners and tenants unable to do this were then dropped from further consideration.

SUPPLY.—It was next attempted to ascertain what percentage of the farmers owning their land and able to give good security or indorsed note is unable to obtain needed short-time or accommodation loans and advances because of insufficient opportunities to borrow. It appears that 48 per cent of the correspondents reported that farm owners were able to obtain such loans. The other correspondents reported that 36 per cent of the farm owners in their communities were unable to do so.

A similar question pertaining to long-time loans brought reports from 47 per cent of the correspondents that farm owners were able to obtain such loans. The remaining correspondents reported that 40 per cent of the farm owners were unable to do so. The corresponding percentages for tenants are nearly the same. It is easier to obtain short-time loans than long-time ones.

No attempt was made in the schedule to define long time and short time. This was purposely avoided in order that the correspondents might make their answers correspond to the local variations from the general fact. This general fact was that short-time loans were for periods less than one year.

USES.—Correspondents were requested to state what percentage, in their opinion, of the farmers owning their land and able to give good security or indorsed note would use borrowed money beyond the amount, if any, now owed by them, conservatively and profitably. Many of the correspondents answered this question in such a way as to indicate that they did not understand it; but of the answers indicating a correct understanding, 26 per cent reported that no farm owners would so use borrowed money, and the remaining correspondents who answered this question reported that 32 per cent of the farm owners would use borrowed money conserva-

tively and profitably. Almost exactly the same percentage is indicated for tenants able to give good security or indorsed note.

CROP LIENS.—It is with much interest that the answers concerning crop liens have been aggregated. One question asked what percentage of the farmers owning their land, who raise cotton, place a lien on the growing crop to secure advances or supplies; and this question was followed by a similar one as for ten years ago. In the combined answers of the three classes of correspondents, 7 per cent reported that no farm owners placed liens on the cotton crop; the remaining correspondents reported that 42 per cent of the farm owners did so, and that 52 per cent of them did so ten years ago. The decline in the percentage therefore is 10 absolutely, or about 20 per cent relatively.

Similar questions were asked concerning tenants, and of the answers, 2 per cent stated that no tenants placed liens on the cotton crop, while the remaining answers showed that 74 per cent of the tenants now place a lien on the cotton crop to secure advances or supplies and that 77 per cent of them did so ten years ago. The decrease is hardly perceptible.

Pursuing the subject of crop liens, 29 per cent of the reporting correspondents stated that no farmers owning their land, who raised crops other than cotton, placed liens on such crops, and the rest of the correspondents reported that 24 per cent of the farmers did so. A similar question applied to tenants and brought answers from 17 per cent of the correspondents that farm tenants did not place liens on crops other than cotton, and the rest of the correspondents reported that 40 per cent of the tenants did so.

Information of similar sort was obtained concerning personal property mortgages. Seventeen per cent of the reporting correspondents stated that no farm owners placed liens on their live stock, farm machinery, or other personal property of the farm; and the rest of the correspondents reported that 25 per cent of them did so. The corresponding percentages for tenants are that in 7 per cent of the communities no personal property liens were given by tenants, and that in the other communities from which reports were received 43 per cent of the tenants did so.

WAREHOUSE RECEIPTS.—In communities where elevators and other warehouses are employed for storing grain, tobacco, cotton, and other products, warehouse receipts may be pledged as security for loans. It was sought to discover the extent of this practice, and 63 per cent of the correspondents reported that it did not exist and the remaining correspondents reported that 26 per cent of the farmers holding warehouse receipts used them for the purpose of getting credit.

SOURCES OF CREDIT.—A short analysis of the sources of agricultural credit was attempted and with considerable success. There are often various sources of credit in the same community, and it was hoped that the correspondents would be able to determine the relative importance of each.

It appears that of the principal sources of agricultural loans and advancements (not including purchase money) local banks supply 57 per cent of the total agricultural credit in communities where banks exist; neighbors supply 16 per cent in communities where they contribute anything to the supply of credit; individual lenders in near-by cities and towns supply 12 per cent in communities in which any supply of credit is derived from them; loan agents for outside capital supply 16 per cent in communities where such loan agencies exist; local general stores supply 25 per cent in communities where they contribute anything to the supply of credit; and unclassified sources of credit supply 13 per cent in the communities where these unmentioned sources of supply exist.

Local banks supply more than half of the agricultural credit, general stores supply one-quarter, and both supply more than three-quarters. The supply from neighbors is about one-seventh. The credit that is supplied from a distance or what may be regarded as the supply from outside sources, is about one-seventh of the total supplied; and consequently it appears that about six-sevenths of the supply is derived from strictly local and near-by sources.

These conclusions apply to the communities in which these sources of credit are found. They are not found in all communities. It was reported by correspondents that in 1 per cent of the communities there was no supply of credit by banks; in 11 per cent of the communities no supply by neighbors; in 39 per cent of the communities no supply by individual lenders in near-by cities and towns; in 51 per cent of the communities no supply by loan agents for outside capital; in 47 per cent of the communities no supply by local general stores; and in 93 per cent of the communities no supply from other sources.

AMOUNT OF LOANS.—An effort was made to ascertain the range of the bulk of the individual amounts of loans and advances made to farmers owning their land, but not including purchase money. In the opinion of the correspondents, the range is, on the average of answers, from \$274 to \$1,767; and a similar question concerning tenants indicates a range of \$107 to \$473.

STORE CREDIT.—There is one source of credit in rural regions in this country that is very prevalent and yet it is rarely mentioned in discussions of rural credit. This is the running accounts at the stores where the farm owners and tenants buy groceries and other goods without giving security. Correspondence were requested to report with regard to this and their answers indicate that 59 per cent of the farmers owning their land have running accounts with local merchants and that 53 per cent of the tenants have such accounts in communities where this form of credit exists.

In 1 per cent of the communities it was reported that farm owners did not obtain store credit and in 2 per cent of them that tenants did not do so. Country merchants sell goods on "trust" to more than one-half of the farm owners and farm tenants in their communities, and this without security.

RATES OF INTEREST.—Substantially no statistics of rates of interest paid by farmers have been collected in this country since the census of 1890; and consequently it was especially desirable that the correspondents be requested to contribute information in this investigation and report with regard to the subject. Six questions were framed, and these were answered with undoubted understanding as to the meaning of the questions. The results are of much interest.

The questions were expressed in dual form, in such a way as to call for an answer for agricultural loans and also for loans on town and city real estate, the circumstances of the loans being otherwise substantially the same.

The interest rates on the bulk of the purchase money throughout the United States range from 6 to 8 per cent in the case of farms; and also from 6 to 8 per cent in case of town and city real estate. Upon taking account of the differences in rates of interest as between farm and town property, it is discovered that in the case of purchase money loans 10 per cent of the responses state that the rates are higher for farms than for town and city real estate, 33 per cent report that the rates are lower for farms than for town and city real estate, and 57 per cent report that there is no difference in rates of interest on purchase money loans between the two classes.

A similar question was asked with regard to short-time loans, with the result that 11 per cent of the answering correspondents reported a higher rate for farms than for town and city real estate, 21 per cent reported a lower rate for farms, and 68 per cent reported no difference.

The same question for long-time loans induced 8 per cent of the responses to report that the rates of interest on farm loans were higher than for those on town and city real estate, 33 per cent to report that the rates were lower on farms, and 59 per cent to report no difference between the two classes of real estate.

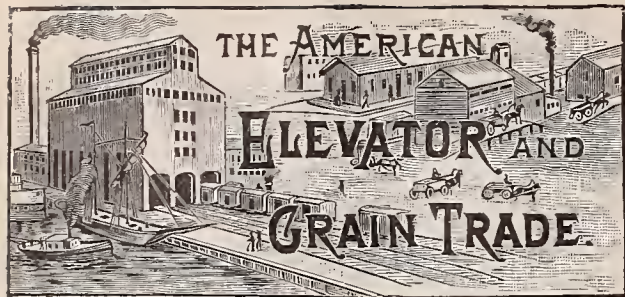
COSTS OF BORROWING.—Rates of interest alone do not determine the cost of borrowing. There are commissions, bonuses, and various costs and expenses that are borne by the borrower, and these, if added to the rate of interest, often considerably increase it. It was reported by 22 per cent of the answering correspondents that no commissions were paid in their communities; those who stated that commissions were paid disagreed very considerably. The country banker stated that the rate of commission, when paid, was 2 per cent. The country merchant and persons of other occupations constituting another class of correspondents reported 4 per cent, and the farmers reported 5 per cent. These differences seem hardly capable of reconciling. The terms for which mortgages are made usually range from three to five years, and consequently a commission of from 2 to 5 per cent adds appreciably to the annual rate of interest.

The correspondents were requested to report costs of abstracts, if paid by the borrower, and 94 per cent of the responses reported that the borrower did not pay for an abstract. It appears from the answers by correspondents that in cases where the borrower paid for an abstract of title or for searching the records, the average cost was \$11.40, and in cases where the borrower paid the conveyancer for drawing the papers the average cost was \$4.70. Sometimes, too, the borrower was required to pay the registration fee, and when he did so the average cost was \$1.50.

CO-OPERATIVE ASSOCIATIONS.—Finally it was requested of correspondents to state what percentage, in their opinion, of the farmers known by them and to them would be willing to form an association to receive their own deposits for loaning to themselves, and also to borrow from the outside, on the combined security of the property of all members, money to loan to themselves.

Of the correspondents, 32 per cent reported that there were no farmers who would be willing to form such an association, but the remainder of the correspondents reported that about 40 per cent of the farmers stood ready to organize such co-operative associations.

The foregoing is a brief and highly condensed statement of the chief results of this investigation of local conditions relating to agricultural credit. Numerous variations from the general facts appear in the nine geographical divisions of the states, and still more so in the different states themselves.



Published on the Fifteenth of Each Month

BY

Mitchell Brothers Publishing Co.

OFFICE:

Manhattan Building, 431 South Dearborn Street
CHICAGO, ILL.

HARLEY B. MITCHELL.....Editor
A. J. MITCHELL.....Business Manager

Subscription Price, - - - \$1.00 per Year
English and Foreign Subscription, - 1.75 " "

ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching persons connected with this trade. Advertising rates made known upon applications.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO, DECEMBER 15, 1912.

Official Paper of the Grain Dealers' National Association
and of the Illinois Grain Dealers' Association.

DR. WILEY AS A CANDIDATE.

The movement in behalf of Dr. Wiley's candidacy for Secretary of Agriculture, if there is indeed such a movement, is largely the work of the food-faddists and distinctly feminist in manner and matter. That the Doctor and numerous of his pupils, writers on foods in the women's magazines, have told some wholesome truths about food frauds in substance and label, makes it all the more difficult to convince the public that on many much more essential matters, Dr. Wiley's and his pupils' alleged dietetic science is not science at all; and that to send Dr. Wiley back to Washington in order to "vindicate" his supposititious infallibility as a guide and a dietician would be to offer a grave menace to the usefulness of the Agricultural Department which needs above all things a calm, level-headed, dispassionate executive officer, with some knowledge, perhaps, of agriculture in general terms, but certainly with no temperamental handicaps of the autocrat or the partisanship of the rider of a hobby that has not a sound constitution.

The fundamental defect of Dr. Wiley, as a department officer, is his narrowness, as seen as a characteristic sample, in his contention, in his administration of the pure food act, that "its letter should be strictly construed; that the slightest admixture of foreign matter in an article of food should be adjudged an adulteration, regardless of quantity and of harmlessness," a view that common sense repudiates and which a learned Massachusetts judge has very lately declared to be bad law, in a decision in which he says that the pure food law is "one of the most useful laws ever placed on the statute books," yet one that nevertheless is "a law

passed for practical purposes, to be considered by practical people and not given an unduly theoretical construction,"—a law that enforces honesty but does not require the impossible, nor was designed to give aid and comfort to the quack.

AN UNFORTUNATE BREAK.

NASHVILLE, Tenn., Nov. 27.—Charles D. Jones, president of the Grain Dealers' National Association, today announced that a conference of all grain exchanges of the country would take place in Chicago December 16 to discuss proposed legislation directed toward abolishing the practice of dealing in grain for future delivery. A bill with this object in view has been prepared for presentation to the committee session of Congress.—*Many Papers.*

The above is a widely circulated item, purporting to be authentic, which was, in fact, a "bad break" by a reporter who does not seem to have been quite entitled to confidence. The "conference" is merely a meeting of the National Association's legislative committee, to which a representative of the Council of Grain Exchanges has been invited.

In view of the fact that so many of the daily papers headed the notice to convey the implication that the conference was the beginning of an attack by the Association on the exchange system of trading in futures, the "break" was peculiarly unfortunate at this time, because there is now no bill before Congress to interfere with trading in grain futures; and few of the best informed men in Washington anticipate action in the Senate at this session on the Beall bill limiting trading in cotton futures only, in spite of the fact that it has been received by the Senate as a bill passed by the House.

There is every reason to believe little of constructive legislation, beyond appropriations, will be attempted at this session, for at least two reasons: (1) there is not time for it, and (2) it seems to be the purpose of the present Congress to devise everything it can to the new administration, for the double purpose of giving it the credit for new laws and administrative policies the Wilson men stand for and to hold his administration responsible for laws and acts the opposition does not think wise. New bills offered at this session would have about as much chance as the proverbial clawless cat in hades.

ATTACKING RULE 23.

A well organized movement is afoot among members to repeal Rule 23 of the Chicago Board of Trade, known as the "anti-corner" rule, and a petition to that effect is now in circulation by some of the best men on the Board. The rule, which automatically becomes a part of every contract for the future delivery of grain, is as follows:

In case any property contracted for future delivery is not delivered at maturity of contract, the president shall appoint a committee of three from the membership at large, to be approved by the board of directors, which committee shall determine as nearly as possible the true commercial value of the commodity in question on the day of maturity of the contract, and the price so established shall be the basis upon which settlement is made.

As liquidated damages, the seller shall pay to the purchaser not less than 5 per cent, nor more than 10 per cent, of the value of the commodity as established by the committee; the percentage, within said limits, to be such as, in the judgment of the committee, may be just and equitable.

The theory of those opposed to the rule is, that it unduly favors the short-seller, which is,

of course, true. If the buyer is compelled to accept grain at a price that on delivery day is much below the contracted price, is it *contra bonos mores* to ask the seller to deliver grain worth much more at delivery than he sold it for? Equitably and proverbially, it is not.

And yet there may be a difference, if only in the matter of trade expediency.

(1) The public, which does not think very deeply on these matters, but does have a decided influence on legislators and legislatures, ignores the effects of a decline but does take notice of a rise—a bull movement—which unfortunately is inevitably magnified and sensationalized by the press. It is hardly necessary to dwell here on the effect such sensationalism has upon the public's attitude toward the exchange.

(2) It was more to avoid criticism by the public than to shield the short-seller that Rule 23 was incorporated in the Rules, in spite of its apparent inequity. But, while it may create inconvenient conditions in the cash market and limit profits, is the rule after all so very inequitable? It provides for the payment of liquidated damages for default, in an amount equal to about 5 to 10% of an adjudicated fair cash valuation of the grain. Default should be penalized, of course, as a check on reckless short-selling; but, as would be the fact in case of a manipulation, it is hardly fair to permit the plaintiff, the manipulator, to fix the amount of the damages. In court, actual damages are matters of proof; and so far as surface indications go here, Rule 23 embodies this not unsafe legal principle.

Rule 23 may not be absolutely fair—probably it is not; but in the present state of public (and legislative) opinion, since the rule is absolutely preventive of the boggy, "corners," it might be well to consider whether the expedient is not more desirable than the equitable.

UTILIZING THE WET CORN.

Corn has been drying out so encouragingly this fall that presumably the trade will not have with the current crop proportionately the same trouble on account of moisture that has been suffered in the immediately past years. Nevertheless the farmer should be kept continually advised of the fact that water in corn is valueless—worse than valueless under some circumstances, as when the amount is great enough to threaten the safety of the grain when in movement in trade and commerce. There is no reason, except the neglect of dealers to enforce the truth, why a farmer should expect as much money for wet corn as for corn with only 12 to 16% of moisture, more especially when the former corn is essentially a "perishable product" at every stage of its movement; and dealers who handle it should buy on the wet basis.

There is one place where the farmer can put wet or very wet corn, and that is into cattle and hogs. In proportion to dry matter sweet wet corn will make rather more beef fat than the same amount of dry matter in dry corn. Just why this is so is not quite clear, but in practice it works out that way. The farmer should, therefore, be urged to feed his wet corn and hold the drier grain and thus serve the double

good purpose of making more meat and saving some corn from possible loss in transit from the farm to the consumer.

RAILWAY EFFICIENCY.

The organ of the Chicago Association of Commerce, *Chicago Commerce*, quotes from a report of an employees' committee of inquiry of the I. C. and Y. & M. V. lines that,—

The average movement of all freight cars on our road during the busy season is twenty-seven miles per day. This is equal to three hours moving in trains and twenty-one hours standing still on sidings, 87 per cent of the time being consumed on sidings and only 13 per cent in movement.

The average time consumed by shipper in loading cars is less than two days and the average time consumed by consignee in unloading is less than three days, Sundays included.

The average number of loaded trips made per car per month is two and seven-tenths or an average of eleven days to handle each load. This includes all cars, revenue and company freight, loaded on our rails and loaded cars received for other roads.

The average distance loaded cars move is 204 miles. Therefore the car on an average, in the busy season, is employed per month as follows: 13 days loading and unloading; 3½ days moving in trains; 13½ days standing waiting movement, switching or repairs.

The report would seem to be conclusive to the layman that the shipper and the consignee taken together are not the cause of congestion or car shortage since the time a car is in the patrons' hands is less than half the time the car is in service. The layman may not be able to point him out, but this report is suspicious of a coon somewhere in the woodpile of railway management.

Suppose the animal could be located and the efficiency resulting should be increased to 35 miles movement per day, equal to about 25%, or four hours' moving, figured out in non-technical expression, the report says it would mean adding 18,666 cars to the equipment of those two lines and a saving of \$3,065,000 per annum in per diem for use of foreign cars. Supposing, too, that 20,000 cars belonging to these two roads, now unaccounted for, could be found and brought home, the I. C. system might be able to handle more grain for its own patrons, however much those of poorer lines, now using those cars, if they are, in fact, *in esse*, might suffer.

But shippers can't make these reforms for the railroads. Some of the despised efficiency engineers' "dope" might help, however.

CAUSE OF PELLAGRA.

It may not be supererogatory to here say that the Pellagra Conference at Columbia, S. C., in October did not endorse Commissioner Watson's theory, expressed at Norfolk, that "spoiled corn" is a definitely known cause of pellagra. Although the Conference was attended by some of the most noted medical students of pellagra in the world, and although more than seventy papers were read, treating of the disease in all its manifestations, the Conference was able neither to differentiate its cause nor to point to a reliable remedy. The Conference did, however, perhaps out of deference to its hosts' opinions, cast the expected stone at "spoiled corn," as will be seen in the resolutions quoted on another page.

This may or may not be fair to "spoiled corn" (which the Conference quite neglected to define in any specific way, although corn may be "spoiled" in many different ways and to

different degrees); but, really, as one among the practical troubles of commerce in corn, it makes little difference. The pure food officials in the South have the state laws with them and the power to rule what is "spoiled corn" as a commercial commodity; and the shipper to the South and Southeast must take cognizance of those laws and their delegated power of seizure and even of destruction, and govern himself accordingly.

A SISYPHEAN LABOR.

It is as hopeless a task, and as incessant, as that of Sisyphus, to attempt to expose the blunders—or worse—of lay writers of quasi-technical "stories" for rural consumption; because where a writer starts with a false theory deduced from misunderstood, or deliberately misstated, facts, he is pretty sure to make an article that is more salable, because more appealing to popular ignorance and prejudice, than would be a cold statement of facts and a rational deduction therefrom.

A typical case in point appeared in the *Country Gentleman*, Nov. 16, entitled, "The Struggle for Standard Grades," whose anonymous author endeavors to make the point that at the Norfolk convention the objections to the majority report of the grades committee were made and the final action to delay making any changes in the grades until the Government's "standardized grades" should be announced, was taken—

Why? Because of the action of the Secretary of Agriculture, last March, in suspending the ruling of the Bureau of Chemistry, made under the Food and Drugs Act in February, that no grain or hay that was unsound, musty, heating or in any way deteriorating, or oats that had been bleached or purified should enter into interstate commerce after a certain date. It will be remembered how loud were the protests not only of the grain dealers but also of the National Grange. The spokesman for the farmers at the hearing said: "We want protection. We want an establishment of grades that we can know and tell without calling in an expert or a grain man."

Delay of a year, at best, is certain. . . . From the farmers' standpoint the most troublesome feature of the grain situation is the matter of delay.

Not to continue quotations from such a mixture of nonsensical contradictions, the conclusion is drawn by the author that the McCumber inspection bill must be passed immediately. The writer does not indicate how the McCumber inspectors would proceed to inspect anything in the absence of "standardized grades"; but the author dodges the point by calling on Mr. A. E. Reynolds "and his association" to "make answer to a charge that has been hanging over their heads for some time,—the charge made against the grain inspection department of Minnesota by the N. D. Bankers' Ass'n," that the department "records show" (at some time)—

	Inspected In.	Inspected Out.
No. 1 Northern wheat, bus.	99,711.40	196,288.30
No. 2, do.	141,455.10	467,764.00
No. 3, do.	272,047.20	213,459.30
No. 4, do.	201,267.20
No grade	116,021.10
Rejected 56,742.30		
On hand (estimated)		12,732.70

Total \$90,244.30 \$90,244.30

Now examine the figures carefully and you will see that . . . there was shipped out about double the number of bushels of No. 1 Northern that was received. This was due to the hidden mysteries of private-exchange inspection and grading, which Mr. Reynolds insists it is for the interests of the producer and the consumer to continue!

The writer's competency to write understandingly on these matters will hardly stand

much analysis, in view of the manner in which he computes the totals in the table given and obtains the "on hand (estimated)" to balance, which he disposes of with the assurance of a grocer balancing cash; and that is about all that need be said here. The writer hereof understands that a reply to the article, by a competent writer, has been forwarded to the *Country Gentleman*; and we wait with some interest its appearance, willing meantime to wager, however, a big hole in a doughnut against a small one, that the reply will *not* appear.

The superintendent of the Corn Products Co., after the Waukegan explosion, spoke of the disaster as one of the natural risks of the business. At any rate, at the Waukegan plant such explosions have been not unknown hitherto; indeed, this plant has experienced three, we understand. Starch dust, like flour dust, and the impalpable dust of the grain elevator, or of a coal mine, coming in contact with a spark or open flame of fire is as inflammable as gunpowder; but in all well regulated mills and elevators the dust collector has reduced the risk of explosions of dust to practically zero by removing the dust as fast as it is created. Why might not this be tried out in a starch house?

CAR SHORTAGE NOT OVER.

As early as October 24 it was given out from New York that "leading railway men seem to be confident that the danger of car shortage is practically over." Nevertheless from the interior, if not from the transfer markets, there still come reports of the overcrowding of grain elevators and their inability to take any more grain from farmers until there is some relief. This is true in the Northwest, in spite of the record breaking deliveries to the Minnesota markets. The weather has, however, been so far favorable to the roads, and there has been some relief that bad railroading weather would probably neutralize.

Railroad men and the Commerce Commission seem to work toward the same solution of the problem, which takes the form of a higher per diem taxed to connecting lines for use of foreign cars, and toward very much higher maximum demurrage after a given date, with a graduated increase the longer the car is held. The number of cars used for storage is immense. In Kansas City alone there have been 3,000 cars at one time on track holding wheat with demurrage running for weeks. In the export yards of New York lines, the number is even greater, with no demurrage accruing. Goods for export on which the carriers cause delay may miss the vessel contracted to take them out, and it has been the practice in such cases to hold the goods on track until such time as steamer space is provided. The tie-up for this season is often very large, reaching as many as 10,000 cars at a time.

The Commerce Commission is now trying to devise a way to guarantee the arrival of such cars at port and cut down the holding of export shipments, a consummation that would greatly contribute to the more active movement of the crops; failing in this, however, it is believed a higher demurrage charge is practically sure to come.

EDITORIAL MENTION

We are pleased to be "called down" for the statement that Dr. Wiley was endorsed by the Farmers' Congress at New Orleans a month ago as a candidate for Secretary of Agriculture. He was not.

Senator McCumber thinks his inspection bill will be acted upon at the short session; but the Senator is as optimistic about some things that look blue to others as he is chronically bilious about other things that even a North Dakota farmer knows are egregious nonsense—like his fundamental apology for his own inspection bill.

If all the farmers' elevator companies in the Northwest shall weather the shrinkage of prices in the past weeks on their unhedged grain, they will have demonstrated a more solid financial foundation than most of them have been credited with. The stolid objection to hedging that has characterized some of these companies is better evidence of a questionable consistency than of sound business sense.

The movement to increase the demurrage charge has begun in Michigan by the state authorities, and Detroit receivers have found it necessary to protest. Neither the railroads nor the railway commissioners have as yet worked out the details of car service to that degree of perfection that justifies any such experiment as a charge of \$5 per day even as an experiment; and there is the question whether a high per diem will ever be quite fair to the public without accompanying legal provision for reciprocal demurrage.

The December crop report predicts a continuance for 1913, at least so far as winter wheat is concerned, of the remarkable agricultural bounty of 1912, the acreage sown being estimated at 172,000 greater than harvested in 1912, with condition of 93.2, against 86.6 a year ago. In bushels, if this promise is realized, it means a winter wheat harvest in 1913, 182,000,000 bushels greater than in 1912. It need be no damper on present enthusiasm in beardom that the December promise of bounty is seldom realized six months later, even with the "crop killers" muzzled.

There is much speculation as to the effect of Panama Canal tolls on the movement of Canadian wheat *via* the canal to Europe. It is not a safe assumption that the route will necessarily be so used, for when, as it is said, a cent will carry a bushel of wheat ten times as far on water as on rails, it is manifest that the tolls on bulk stuff like wheat must be low enough to meet possible competitive rates around the Horn, or nearly so. The isthmian waterway is certain to cause a rerouting of some of the world's commerce, but the changes are not likely to be immediately so great as some imagine. The great readjustment took place with the opening of the Suez Canal, which changed the face of the world's commerce; the room for anything like a similar readjustment now does not exist, probably, because the world's

commerce and trade move on latitudinal rather than longitudinal lines, and the southern hemisphere is still largely an undeveloped wilderness, populated only by savages.

In view of the work of the Illinois inspection department during the enormous run of grain of the present season, Mr. Inspector Cowen has been able to demonstrate that, as Messrs. Pope & Eckhardt said in a recent daily letter, the indoor "system offers the possibilities for the highest perfection in the grading and classification of grains." Mr. Cowen must be credited, we think, with a sincere effort to bring the system to perfection; and while that has not as yet been reached, the deficiency is not so great that Mr. Cowen's successor ought to have any serious difficulty in reaching the goal which Mr. Cowen has been striving to reach—approximate perfection.

Not that it can be expected to do any good at all—but in view of the helter-skelter distribution of several hundred tons of seeds, bulbs and shrubs by our Congress, it is refreshing to note that the Canadian Parliament provides for a distribution by system. The seeds and potatoes go only to applicants therefor, who must explain the nature of the soil of their farms, their purpose in applying and their willingness to make a report of results. The Canadian official has "politics" down about as fine as any man on earth, but he has not yet descended to the depths of expecting a quarter's worth of bum seeds for flowers or garden sass to make him solid with his voters.

S. P. Arnot, first president of the Council of Grain Exchanges, and one of the well-esteemed men of the Chicago Board of Trade, is a candidate for appointment as a member of the Railroad and Warehouse Commission. As the Commission has sole control of the grain inspection of the State, the appointment of a practical grain man is not only desirable, but would seem to be quite essential to the proper composition of the Commission. Mr. Arnot has not been listed conspicuously as a Democratic politician, but his "regularity" as a party man seems well authenticated; at least his standing on the Board, his business qualifications and his fine personal character, all commend him to the Governor-elect as an ideal candidate.

The President has finally appointed a successor to Dr. Wiley in the Bureau of Chemistry, in the person of Dr. Alsberg, of whom mention was made in these columns in the November number; but it is not expected that the Bureau will resume business after the Wiley manner, even with his chair again occupied. So far as the grain trade is concerned, no drastic measures are expected until the feeding tests with damaged grain and sulphured oats, now going on at the station near Washington, shall have been concluded and the results formulated. Nevertheless, as King & Co. suggest, shippers should bear in mind that sulphured oats can be sold in all but a few Eastern and Southern States, but must be so branded on bill of lading and other bills. Sound, wholesome grain merely weather stained can be sulphurized and sold, but bad grain, sulphurized,

with water added, to raise the grade, may be confiscated by the Government.

Mr. J. R. Mauff of Evanston, Ill., has taken upon himself all the burdens of the farmer as these arise out of the "pure cussedness" of things, animate and perhaps inanimate, and particularly of things governmental. He is a true pessimist. For him there is nothing for the farmer to eat but food; nothing to wear but clothes; nothing to ride in but the automobile. Now we find that the Agricultural Department is sinning against the farmer by maintaining a Bureau of Statistics, the immediate crime of which is that "the entire world is informed in advance of harvesting of the crops just how much of a surplus is being raised. Then the operation known as the 'farming of the farmers,' begins, with but one inevitable result—the depressing of values in anticipation of the movement." This sensitive feeling for others must be something terrible to lug around with one habitually.

Referring the other day to the fact that a company had been incorporated in Macon County, Ga., to own and operate a 3,200-acre farm, the *Atlanta Journal* says that "all omens point to a time, not far distant, when farming will be made businesslike; and those farmers who first utilize the principles of the business world will first reap its rewards." But farming is and has always been in this country a business. It has been managed slovenly, just as the majority of business ventures in town are; but it has been a business, just the same, caring for science only just so far as science has been able to impress itself on farmers as a business accessory. And so it will continue to be; therefore, as has been before said in these columns, the "new agriculture" is appealing to farmers only as it enables them to make their business better: to increase their output without disproportionate increase of labor or expense.

T. P. Riddle, of Lima, director of organization of County Agricultural Improvement Auxiliaries of the Ohio Department of Agriculture, is certainly having the success of enthusiasm in the great work of interesting the boys of that State in the study of farming. In Lima in January there is to be a Corn Show, organized largely through Mr. Riddle's efforts, where the work of the boys in the corn field last season will be exhibited; but in the meantime, on Monday next, December 16, the prize winning boys are going to be given a trip to Washington, in the "Buckeye Boys' Corn Special," under the direction of Mr. Riddle, representing the Ohio Department. At this writing, Mr. Riddle informs us, it looks as if the party would contain no less than 300 boys, 210 free trips having been already provided for, while a large number of boys will go along and pay their own way. The trip includes a stop of half a day for entertainment and sight-seeing at Pittsburgh, a daylight run over the Pennsylvania railroad to Harrisburg, and four days at Washington. This remarkable excursion will bear no resemblance to the Coxey band that once descended on Washington from Ohio; but rather will epitomize that new spirit of ambition which is springing up in the breasts of Ohio's young

people to fit themselves for their work in the world by study of the conditions of success in their probable future occupation. Mr. Riddle, as the genius behind this unusual affair, is to be congratulated on the success of his own efforts in this work.

The scale inspection service of the Illinois association has been so satisfactory that Inspector Johnson has more than he can do, and the directors are hunting another capable man, certain that all his time could be filled on a day's notice.

C. P. Bull of the Minnesota Agricultural College reports that already it seems quite certain that the scarcity of good seed will be repeated as to the crop of 1912; and the college has begun to locate all the supplies of good seed that exist in the State. It is discouraging to think that after all this publicity of the seed question, so much negligence continues from year to year.

The terminal private elevators are making contract corn with less loss by shrinkage this year than for several years past. The new corn has been coming so good that only a little blowing is needed to make No. 3 a 2 and handling a good 4 in this way is said to be profitable. Query: Could not some of this profit be made by the country elevator man with inexpensive improvements to his plant?

A down-state co-operative company whose manager fell by the wayside, involving the company to a slight degree over and above the restitution made by the unfortunate man, his relatives and his bondsmen, are not going to have any more nonsense in the management hereafter and have increased the company directory to nineteen members. Oh, yes, it is understood there are at least twenty stockholders, but one may be "defective." However, the reason for drawing the line at nineteen is not very clear to outsiders.

Missouri grain men expect to be entangled this winter in another attempt to take away from the terminal markets the legal right to supervise the weights and the weighing apparatus used for measuring grain. Several years ago the legislature undertook to do this, but the Supreme Court nullified the act as unconstitutional. This winter's campaign by the legislators who have this business rattling around in their heads is to go at it by means of a Public Utilities Commission. Under another name political control of the inspectors and weighers might be less objectionable than now, but just how does not now appear.

The suit of R. S. Patterson of Wilkes-Barre, Pa., against the Buffalo Corn Exchange to collect \$150,000 damages, was tried last week, the jury giving Mr. Patterson a verdict of \$2,000. He had based his suit on an alleged inability to buy or sell grain on that Exchange; but it appeared from his own testimony that he was able to and had bought grain there since 1907 from three different firms and had never been refused the Exchange quotations. The fact came out that Mr. Patterson had refused to live up to the rules of the Exchange and settle a dif-

ference, hence he came under the penalty of Rule 3, excluding non-members who fail to adjust claims of members; yet the rule seems never to have been absolutely enforced as it should have been. As the court instructed the jury that no evidence of conspiracy had been developed, the verdict of \$2,000 in Patterson's favor can only be attributed to the well-known eccentricities of the petit jury.

A fair sample of reckless statement comes from an unexpected quarter, no less than the manager of the Long Island Railroad farms at Medford, who has been quoted by New York newspapers as having laid at the doors of the New York Produce Exchange [note how the name lends verisimilitude to the charge] the high commissions and other charges made for handling vegetable produce in the New York market. President Aspegren very properly rebukes such unpardonable ignorance and recklessness of statement, it being a matter of common knowledge to all interested in the produce business that the articles mentioned are not dealt in on the Exchange, and the manager named, if a competent man, should have known it. Mr. Aspegren adds:

In this connection it might be well for you and your farmer friends to study and copy the methods employed by the New York Produce Exchange in the marketing of grains and other farm products for spot and future delivery, by means of which the total middlemen's commission on such products as are dealt in on our Exchange is brought down to anywhere between one-quarter per cent and 1¼ per cent from producer to consumer, the methods amounting to practical auction sales in popular language.

Those exchanges of the country which are organized along the same lines as the New York Produce Exchange have done more for the welfare of the country in relation to the marketing of food supplies than any other commercial organizations; and the continued extension of the work and influence of such institutions as ours is, in my opinion, the only practical solution of the high cost of living problem.

This is undoubtedly true. If the methods for handling grain and provisions between the producer and consumer could be applied to other farm produce, such as poultry, butter and eggs, apples, potatoes and other forms of non-perishable (comparatively speaking) fruits and vegetables, it is more than probable the paradox would appear of better prices to the producer and lower prices to the consumer, and very considerably more concern for the welfare of both by the commission-middlemen handling those footstuffs.

In view of the congestion in Congress at the short session always, and at this session in particular, the one immediate duty of the National Association's legislative committee is to try to "get action" on the Pomerene bill of lading bill which passed the Senate in August last and is waiting for action in the House. Although the American Bankers' Association, through its general counsel, has addressed letters to the members of the committee on interstate and foreign commerce having the bill in charge and has received "reassuring replies," indicating some chance of action at this session, nevertheless a "prominent member of the committee," said the *Journal of Commerce* on December 6, declared that "there is absolutely to be no legislation this winter on any bills of

lading law," and "he had particular reference to the Pomerene bill. The bill," he added with exasperating appearance of dictatorial authority, "will not even be considered in the committee at this session, nor will any other bill relating to this topic. Possibly near the end of the session there may be some hearings by the committee on the bills of lading measure before the committee, but if they are had at all they will be simply acts of politeness to the people who may be requested to be heard." This is very disheartening; but it is still within the limits of the possible that even in the face of this freezing disregard of the great cry of the commercial world for relief in this respect by the House, the united pressure of the Bankers', the Grain Dealers' National and the grain dealers' State associations and other commercial organizations, if exerted now vigorously, might accomplish something. It certainly would seem to be a waste of effort for the trade organizations to now neglect this matter, after so many years so near its consummation, in order to worry about other things that do not appear to be immediately pressing nor likely to be for a year to come.

Senator McCumber and Banker Macfadden of North Dakota and the astute Observer of the *Country Gentleman*, who deplore the wickedness uncovered by the table printed in an editorial on page 327, may be interested in the interest in wheat screenings of J. K. Heywood, chief of the miscellaneous division of the Bureau of Chemistry, who has been studying at Minneapolis the composition of stock feeds. "Screenings, as used in stock feeds, are of great importance," he said. "They consist of broken wheat kernels, weed seeds and a small amount of chaff, things which are gleaned from the good wheat in a screening process through which the grain is put before it is used for milling purposes." It would be too much, perhaps, to ask the distinguished lay experts named if it might not be possible that cleaning the wheat would account for the apparent manipulation of the grades complained of and also for the otherwise unaccounted for "on hand (estimated)." A man who has gumption enough to break into the Senate or to run even a good county bank ought not to be nonplussed by a few thousand bushels of screenings that the farmers generously sent to Minneapolis and donated to the elevators, which sold them to the stock feeders for real money, after raising the grade of the wheat by taking them out. Only the other day the *Chicago Evening Post* quoted the "head of one of the largest institutions in the Northwest as saying: 'North Dakota is likely to lose 10,000,000 bushels of grain owing to uneconomic methods of harvesting; but this was to be expected. We hope to be able to educate the farmers of the Middle West to stack their grain properly in time, and now have about 300 demonstration camps under expert supervision situated throughout the Dakotas and Minnesota for this purpose.' And still the lay experts can see at the terminal markets only the cussedness of inspectors and "Mr. Reynolds and his association," but nothing of the carelessness or futile cupidity of the farmers themselves.

TRADE NOTES

W. M. Mentz, representing the S. Howes Co., Silver Creek, N. Y., has changed his address from Philadelphia to Sinks Grove, W. Va.

The Muncie Gas Engine & Supply Co. of Muncie, Ind., has increased its capital stock from \$100,000 to \$250,000. The company will finish the year after having completed the largest business in its history.

The B. S. Constant Co. of Bloomington, Ill., report that they have been remarkably busy the past months and will start the New Year with a larger demand than ever for their machines and better facilities than ever for making prompt shipments.

The Wolf Company, Chambersburg, Pa., have secured orders for their new Conveyor Wheat Washers from the Kellogg Toasted Corn Flakes Company, Battle Creek, Mich.; Aurelie Herrera & Cie, Irapuato, Mexico; Northrup Milling Company, Platte City, Mo., and the Tacoma Grain Company, Tacoma, Wash.

W. H. Salisbury & Co. of Chicago, Ill., have recent orders for their "R. F. & C." Solid Woven Rubber Belting as follows: F. C. Brown Grain & Hay Co., Lowell, Ind., 106 feet of 16-inch; Kankakee Elevator Co. of Kankakee, Ill., supply of 30-inch belt for elevator equipment; Dunlop Milling Co. of Clarksville, Tenn., 220 feet of 24-inch belt.

A recent caller at our office was Mr. Allan Borum, of Copenhagen, Denmark. Mr. Borum is interested with his father at home in the erection of grain elevators and mills and general mill furnishing business. He is making a tour of his country for the purpose of studying American engineering methods and machinery with especial reference to the grain and milling business.

The American Society of Mechanical Engineers, 29 West Thirty-ninth street, New York City, held its annual meeting in New York, December 3 to 6, 1912. The plans are being arranged for a meeting of the American Society of Mechanical Engineers with the Verein Deutscher Ingenieure of Germany and a tour of inspection of the industries of Germany next June.

The Hess Warming & Ventilating Co., of the Tacoma Building, Chicago, has just brought out a new booklet on its Hess Improved Moisture Tester illustrating the tester in its late improved form. These improvements have been along the lines of better and more lasting service as well as of beauty of lines and finish. Orders have been large for the testers from all sections.

The Day Company of 38 South 12th street, Minneapolis, Minn., has completed a large number of installations of its Day Dust Collecting system the past year. These installations include the largest elevators that have been built in the United States and Canada as well as the grain elevators of medium size in all sections. The Day Dust Collecting system is now considered indispensable as a part of the modern grain elevator equipment.

Jones Power Transmission Machinery is almost what might be termed a household word among purchasers and users of good machinery. This firm has been building its line of pulleys, shafting, hangers, friction clutches, etc., for years with the constant idea in view of quality and service. As the result the manufacturers, the W. A. Jones Foundry & Machine Co. of 1411 North Ave., Chicago, Ill., have an unassailable record for producing a superior article of product along lines of power transmission machinery.

The Barnard & Leas Mfg. Co., of Moline, Ill., is pushing the work forward rapidly on its new plant, which is expected to be ready for occupancy by January 1, 1913. It will be modern in all respects, and of sufficient floor space over the old works to afford every facility to care for its rapidly growing business. The company reports an unusual number of orders for the last few months. In spite of the temporary handicap occasioned by their late fire, they have been very busy during the past season, and orders are still coming in at a lively rate. The large crops this season and the prosperous condition of the country promise a good business for the

next season, and this, with their new plant and increased facilities for handling orders, should make it a banner year for the company.

The annual national exhibition of commercial motor vehicles will be held in Chicago from February 10 to 15, 1913, occupying the second week of the Thirteenth Annual National Automobile Show. The display will be larger and more diversified than ever, filling all of the floor space in the Coliseum Building, Coliseum Annex, and First Regiment Armory. In all there will be on exhibition about two hundred and fifty different models of motor vehicles suited to every kind of industrial, commercial, municipal and federal purpose. So many of these are entirely new designs that they will embody the latest improvements in every detail whereby the efficiency, reliability, durability, accessibility and general ability of the power vehicle is increased.

CANALS EAST AND WEST.

The Erie Canal was closed down early in order to turn the prism over to the contractors on the enlargement. About that time State Engineer J. A. Bensael told the New York Produce Exchange that during 1911-12 about one-third of the work of enlargement was completed, leaving about one-third still unfinished, which he expected would be finished and opened for navigation within three years. The amount already spent on the enlargement is put at \$50,000,000 and \$30,000,000 more will be required to finish the work, against \$100,000,000, the initial estimate and amount authorized by vote of the people of New York State.

The size of the boats that will be 'practicable' on the canal will be 1,500 tons carrying capacity, the locks being large enough to pass through two barges at one lockage.

Mr. Bensael said there would be fourteen terminals in New York City, the chief being at Gowanus Bay, Newtown Creek, the Port of Call at Dykeman Street, North River, and at Spuyten Duyvil.

As to terminal warehouses, he said it is only prudent to get areas so that the public may have absolute control of its terminals, and he had endeavored to secure this. To his mind there is considerable danger in the State going into the warehouse business, but a large number of people think otherwise. That is not a matter for the engineers to decide, but the business of those concerned. It is possible, he thought, for the terminals to be completed by the time the canal is ready for use, but the difficulty is that nothing is as yet heard of craft being built for the new canal zone—none had apparently come down to the point as to what kind of craft will be used. The first duty of the State officers is to secure the terminals and make them available and leave the question of warehouses, derricks and similar apparatus and small features to follow along the lines that commerce may find desirable. The new canal may be able to have its season of navigation continued to December 15, but the date of closing will always depend on the season.

MORE ABOUT THE ILL. & MICH. CANAL.

The Commissioners of the Ill. & Mich. Canal of Illinois recently prepared a freight rate chart showing the difference in the cost of hauling bulk stuff by canal and by rail. Grain, for instance, could be canal hauled from Rock Island (Mississippi River via Hennepin and the I. & M. canals (200 ton barges) at 57c per ton, as against \$1.80 by rail; or iron castings at 37c a ton, as against \$2.20 by rail.

It is understood that Joy Morton and the Commissioners are drafting a bill for an appropriation of \$1,000,000 to enlarge the locks and clean out the canal prism for a depth of six feet of water. Mr. Morton's experience during the past season sending salt by canal from Chicago to the Mississippi River showed that such freight could be handled not only cheaper by water than by rail but more expeditiously than by rail.

German state railroads have reduced rates on Russian grain to induce imports, or movement, through that country of grain that formerly was delivered by water route.

FOREIGN COMMERCE OF THE U. S.

The foreign trade of the United States will cross the four-billion-dollar line in the year which ends with this month. Its highest former record was 3,626 million dollars in 1911, and it only crossed the three-billion-dollar line for the first time in 1906 and the two-billion line in 1899. Imports in the ten months of the current year for which figures are now available in the Statistical Division of the Bureau of Foreign and Domestic Commerce amounted to 1,511 million dollars and exports to 1,871 million, making it apparent that the imports of the full year will approximate 1,800 million and the exports 2,300 million, or approximately 4,100 million dollars, against 3,626 million in 1911.

Imports have practically doubled in value since 1901 and exports have practically doubled since 1904. The exports of domestic products, which had never touched the two-billion line until 1911, will in 1912 approximate 2¼ billion dollars, while the exports of foreign merchandise during the year will probably fall slightly below the high record of 37¼ million dollars in 1910.

One of the striking features of the rapidly enlarging import trade is the increase in importations of non-dutiable merchandise. Returns thus far received, covering the ten months ended with October, indicate that the quantity of non-dutiable merchandise entering from foreign countries during the full year will be nearly or quite one billion dollars in value and will certainly pass the one-billion-dollar line if the free merchandise coming from our own islands is added to that imported from foreign countries. The value of duty-free merchandise entering the country a decade ago, in the calendar year 1902, was but 409 million dollars; in 1905, 530 million; in 1907, 636 million; in 1911, 794 million, and in 1912 seems likely to approximate 975 million dollars. In the single year 1912 imports show a growth of more than 250 million dollars and exports a growth of over 200 million dollars, when compared with the immediately preceding year. The growth in imports occurs in all the great groups—foodstuffs, manufacturers' materials, and finished manufactures; that in exports occurs chiefly in manufactures. Exports of foodstuffs show thus far a slight decrease in 1912 as compared with 1911, while crude materials for use in manufacturing show an increase of but about 13 per cent and those of manufactures an increase of 16 per cent.

This increase in foreign trade, while distributed among all the grand divisions except Africa, is especially apparent in the trade with our neighbors on the American continent. Imports from North America in the nine months for which detailed statistics are now available increased 60 million dollars over the corresponding period of 1911; those from South America, 37 million dollars; while exports to North America in the same period increased 65 million dollars and those to South America, 14 million dollars. Imports from North America increased about 25 per cent, those from South America 30 per cent, those from Europe 16 per cent, those from Asia a little over 5 per cent, and those from Oceania 17 per cent. Exports to North America in the same period show an increase of 18 per cent, those to South America 16 per cent, those to Asia 30 per cent, those to Oceania a little less than 10 per cent, those to Africa 7 per cent, and those to Europe 6 per cent, though the figures for the closing months of the year will probably increase very materially the movements to Europe by reason of the unusually large supply of wheat available for that market in the domestic production of the current year.

The Atlantic ports get the lion's share of the increase in imports, but the northern border of the Pacific Coast ports show the largest percentages of gains in exports. Imports on the Atlantic Coast show a gain of 154 million dollars in the nine months under review; the Gulf Coast and Mexican border ports, a gain of 16 million; the Pacific Coast ports, a gain of 12 million; the Northern border ports, a gain of 17 million; and the interior ports a gain of 1 million dollars. On the export side, Atlantic Coast ports show a gain of 55 million dollars; the Gulf Coast and Mexican border ports, a gain of 29 million; the Pacific Coast ports, a gain of 27 million; and the Northern border ports, a gain of 49 million dollars, the percentage of gain being, in the case of the Atlantic Coast ports, about 6 per cent, the Gulf Coast and Mexican border ports, about 10 per cent; the Pacific Coast ports, 40 per cent; and the Northern border ports, 22 per cent.

Between September 1 and November 15 28,589 cars of grain were loaded by Canadian elevators and 8,899 at loading platforms.

The Soo Line agricultural special, during a trip of 13 days that ended at Minneapolis on November 21, was visited by 22,270 persons.

Charleston, S. C., will try to get a part of the I. H. C.'s \$1,000,000 crop betterment fund to support a corn experiment station near the city.

A Central Illinois shipper sent in a carload of oats to the Rogers Grain Company on Dec. 6, which contained 3,236 bushels weighing 103,560 pounds.

EXPORTS AND IMPORTS.

The following is a statement of the exports and imports of various cereals, seeds, etc., for the month of October, 1912, and for the ten months ending with October, 1912, as reported by the Bureau of Statistics, Department of Commerce and Labor (quantities only unless otherwise stated):

ARTICLES.	OCT. 1912		TEN MONTHS, ENDING OCT.	
	1911	1912	1911	1912
Barley, bu.....	132,897	1,373,235	3,356,459	3,028,227
Buckwheat, bu.....			40	198
Corn, bu.....	2,934,399	1,154,009	55,209,002	26,603,334
Corn Meal, bbls.....	42,033	28,822	416,575	350,908
Oats, bu.....	206,268	9,268,038	1,650,612	17,372,376
Oatmeal, dolls.....	184,449	194,133	1,778,996	1,743,928
Rice, lbs.....	2,417,688	561,057	32,545,493	4,767,994
Rye, bu.....	536	116,769	4,307	251,923
Rye Flour, bbls.....	204	142	3,790	3,754
Wheat, bu.....	3,350,200	15,255,077	27,285,729	41,580,254
Wheat Flour, bbls.....	1,216,227	1,220,240	9,219,215	8,273,162
Bran, Millfeed, etc., tons.....	14,726	599	87,108	83,046
Dried Grains, etc. tons	4,761	4,840	69,311	63,617
Rice bran and polish, lbs.....	1,899,876	3,456,850	5,859,674	10,399,442
Total Breadstuffs.....	\$12,349,152	\$26,965,673	\$114,740,992	\$118,278,243
Glucose and Grape Sugar, lbs.....	20,066,543	18,668,249	157,169,273	147,959,418
Hay, tons.....	5,265	6,995	41,980	50,483
Oil Cake and Oil-Cake Meal:—				
Corn, lbs.....	5,361,191	6,454,394	67,109,067	61,438,042
Cotton Seed.....	153,840,629	123,988,718	625,270,945	862,335,417
Flaxseed or Linseed lbs.....	28,818,556	58,392,047	408,373,315	577,664,123
Vegetable Oils:—				
Corn, lbs.....	2,948,710	2,969,565	24,087,942	19,256,035
Cotton Seed, lbs.....	26,358,680	15,960,064	213,059,954	276,305,489
Linseed, gals.....	14,352	19,759	167,507	204,797
Seeds, Grass:—				
Clover Seed, lbs.....	877,058	145,563	2,086,659	1,047,114
Timothy Seed, lbs.....	1,223,309	2,448,241	6,634,104	4,417,816
Cotton Seed, lbs.....	5,287,528	1,136,068	16,065,406	33,693,448
Flax Seed, bu.....	10	57	900	4,337
Other Seeds, value.....	\$22,902	\$63,709	\$307,983	\$474,191
Beans, etc., bu.....	33,878	33,208	245,910	254,154
Imports—				
Corn, bu.....	107	224,471	6,589	886,992
Oats, bu.....	453	379	86,413	3,249,929
Wheat, bu.....	243,429	52,213	748,997	2,194,766
Wheat Flour, bbls.....	7,286	12,981	101,604	133,596
Rice:—				
Uncleaned, including paddy, lbs.....	2,967,443	2,134,209	14,787,369	40,158,264
Cleaned, lbs.....	1,546,405	1,768,439	3,984,388	26,394,303
Rice, Flour, Meal, etc. lbs.....	7,851,875	11,371,394	107,308,569	111,945,383
Hay, tons.....	59,568	17,619	187,896	448,143
Castor Beans, bu.....	101,412	33,471	825,109	911,188
Clover Seed:—				
Red (c), lbs.....	1,522,866	394,022	22,410,580	6,913,643
All other, lbs.....	1,597,994	1,597,994	30,635,113	30,635,113
Other Grass Seeds, lbs	1,736,858	1,638,728	7,168,907	20,446,766
Flax Seed, bu.....	99,554	143,489	6,844,786	7,434,250
Beans, etc., bu.....	23,445	113,810	760,648	1,021,074
Peas, dried (d), bus.....	81,456	158,882	6,265,761	918,511

(a) Includes in round numbers for October, 1912, 45,000 bus., and for ten months 235,000 bus. of damaged wheat from Canada.

(b) Figures cover period since July 1.

(c) Not stated separately prior to July 1, 1911.

(d) Included in "All other in their natural state" prior to July 1, 1911.

OCTOBER EXPORTS OF BREADSTUFFS, ETC.

The October monthly bulletin showing exports of domestic breadstuffs, cotton seed oil, etc., by the United States is as follows:

	OCTOBER		TEN MONTHS ENDING OCTOBER	
	1911	1912	1911	1912
Breadstuff, dolls..	11,270,625	25,910,428	103,563,434	108,140,658
Cotton seed oil, lbs	25,256,818	15,523,140	211,157,428	274,283,327
Cattle, hogs and sheep, dolls.....	742,089	63,759	12,840,646	3,469,099
Meat and dairy products, dolls.....	10,330,087	8,659,689	115,880,622	104,709,981
Cotton, lbs.....	738,749,198	798,951,758	2,942,805,393	3,944,351,428
PRINCIPAL ARTICLES				
Corn..... (Bushels..)	2,908,791	1,080,938	53,514,967	25,998,819
Dollars.....	2,225,870	801,337	30,724,273	19,282,264
Wheat..... (Bushels..)	3,333,074	15,055,961	26,322,155	40,195,969
Dollars.....	3,071,771	14,542,344	24,520,082	39,657,131
Flour..... (Barrels..)	1,214,926	1,213,346	9,190,771	8,248,790
Dollars.....	5,611,119	5,668,177	43,315,578	38,263,379

A great many newspapers and doctors of farmers' troubles are recommending farmers to "hold your grain." These same doctors would doubtless "throw a fit" if some one else advised them to gamble with their grain; yet such is, in fact, the advice quoted. But the advice is probably not bad. A more even marketing of all grain would tend to more even prices and certainly to the marketing of better grain, provided the farmer has cribs and bins to take care of his grain; and if he has not, he'd better sell as soon as he can deliver, although in doing so he "hammers prices."

RECEIPTS AND SHIPMENTS.

Following are the receipts and shipments of grain, etc., at leading receiving and shipping points in the United States for the month of November, 1912:

BALTIMORE — Reported by Jos. B. Hessong, Secretary of the Chamber of Commerce.

Articles	Receipts		Shipments	
	1912	1911	1912	1911
Wheat, bushels.....	1,782,534	1,303,469	1,143,167	1,103,697
Corn, bushels.....	263,277	456,345	20,383	106,601
Oats, bushels.....	4,456,639	48,294	3,509,283	600
Barley, bushels.....	58,482	1,197		
Rye, bushels.....	127,793	104,098		
Timothy Seed, bushels.....	13,715		2,858	
Clover Seed, bushels.....	549	1,015		
Hay, tons.....	5,940	5,176	950	888
Flour, barrels.....	267,861	149,977	145,542	96,386

BOSTON — Reported by James A. McKibben, Secretary of the Chamber of Commerce.

Articles	Receipts		Shipments	
	1912	1911	1912	1911
Flour, barrels.....	219,796	161,914	84,551	25,743
Wheat, bushels.....	1,579,819	1,574,120	1,518,165	977,192
Corn, bushels.....	15,460	66,094	652	117,591
Oats, bushels.....	531,216	342,707	80,078	1,400
Rye, bushels.....	21,288	7,256		
Barley, bushels.....	34,332	2,933	19,929	
Flaxseed, bushels.....				
Peas, bushels.....	13,783	10,485		
Millfeed, tons.....	1,152	1,499	277	884
Corn Meal, barrels.....	4,955	4,170	3,192	2,801
Oat Meal, cases.....	26,562	7,395	7,925	7,324
Oat Meal, sacks.....	10,765	44,165	26,604	24,314
Hay, tons.....	11,600	15,820	1,114	1,791

BUFFALO — Reported by Chamber of Commerce.

Articles	Receipts		Shipments	
	1912	1911	1912	1911
Wheat, bushels.....	18,757,560	12,747,949		
Corn, bushels.....	263,902	960,640		
Oats, bushels.....	1,326,055	667,125		
Barley, bushels.....	3,517,931	2,080,768		
Rye, bushels.....	414,350			
Other Grass Seeds, lbs.....				
Flax Seed, bushels.....				
Flour, barrels.....	1,308,441	1,012,571		

CHICAGO — Reported by J. C. F. Merrill, Secretary of the Board of Trade.

Articles	Receipts		Shipments	
	1912	1911	1912	1911
Wheat, bushels.....	5,082,100	1,593,100	1,890,000	1,789,500
Corn, bushels.....	7,014,500	7,838,350	3,462,500	3,742,900
Oats, bushels.....	13,506,600	5,438,000	13,476,700	4,250,200
Barley, bushels.....	3,845,100	3,215,600	477,100	234,800
Rye, bushels.....	504,000	256,000	147,400	112,200
Timothy Seed, lbs.....	3,608,400	2,649,000	4,912,200	2,051,400
Clover Seed, lbs.....	521,200	176,300	861,900	203,500
Other Grass Seeds, lbs.....	1,346,300	1,319,900	2,020,400	772,600
Flax Seed, bushels.....	206,900	121,600	40,000	12,600
Broom Corn, lbs.....	2,140,100	1,173,100	822,400	772,600
Hay, tons.....	24,511	26,218	1,664	1,477
Flour, barrels.....	749,007	518,210	718,712	597,873

CINCINNATI — Reported by W. C. Culkins, Superintendent of the Chamber of Commerce.

Articles	Receipts		Shipments	
	1912	1911	1912	1911
Wheat, bushels.....	435,019		404,796	
Corn, bushels.....	790,387		310,555	
Oats, bushels.....	829,569		885,858	
Barley, bushels.....	82,108		26	
Rye, bushels.....	88,494		28,498	
Timothy Seed, 100-lb. bags	3,246		1,596	
Clover Seed " "	2,226		1,556	
Other Grass Seed " "	29,757		12,963	
Flax Seed, bushels.....				
Broom Corn, lbs.....	322,525		45,801	
Hay, tons.....	14,603		6,913	
Flour, bbls.....	144,857		121,743	

DETROIT — Reported by M. S. Donovan, Secretary of the Board of Trade.

Articles	Receipts		Shipments	
	1912	1911	1912	1911
Wheat, bushels.....	294,000	193,687	82,000	17,117
Corn, bushels.....	186,000	487,531	106,400	182,739
Oats, bushels.....	383,700	163,691	106,700	10,565
Barley, bushels.....	4,000	37,416		2,242
Rye, bushels.....	81,000	28,975	9,570	12,776
Flour, barrels.....	20,800	24,653	27,600	18,797

DULUTH — Reported by Chas. F. MacDonald, Secretary of the Board of Trade.

Articles	Receipts		Shipments	
	1912	1911	1912	1911
Wheat, bushels.....	18,496,437	6,320,377	21,238,423	6,423,726
Corn, bushels.....				
Oats, bushels.....	1,204,821	804,328	1,244,621	858,152
Barley, bushels.....	2,983,058	1,027,839	3,475,946	1,873,130
Rye, bushels.....	579,576	119,868	681,746	120,112
Flax Seed, bushels.....	6,471,135	3,059,729	5,613,795	2,318,068
Flour, bbls.....	907,050	760,725	1,299,855	941,585
Flour Produced.....	88,710	91,270		

GALVESTON — Reported by John H. Upschulte, Chief Inspector of the Cotton Exchange and Board of Trade.

Articles	Receipts		Shipments	
	1912	1911	1912	1911
Wheat, bushels.....	1,272,000	186,000	1,481,307	
Corn, bushels.....	85,000	18,000	64,655	
Oats, bushels.....	2,000			
Barley, bushels.....				
Rye, bushels.....	9,000			
Flour, bbls.....	34,500	28,046		

KANSAS CITY, MO. — Reported by E. B. Bigelow, Secretary of Board of Trade.

Articles	Receipts		Shipments	
	1912	1911	1912	1911
Wheat, bushels.....	4,250,400	1,215,600	4,098,000	1,315,200
Corn, bushels.....	735,000	1,029,600	377,500	734,400
Oats, bushels.....	753,000	486,200	465,800	345,100
Barley, bushels.....	37,800	23,800	1,400	33,600
Rye, bushels.....	35,200	2,200	26,400	3,300
Kaffir Corn, bushels.....	361,607	201,786	192,857	166,965
Bran, tons.....	1,920	340	4,040	4,680
Flax Seed, bushels.....	4,000		5,000	
Hay, tons.....	35,424	31,860	5,844	4,956
Flour, barrels.....	31,000	18,750	220,500	135,500

MILWAUKEE — Reported by H. A. Plumb, Secretary of the Chamber of Commerce.

Articles	Receipts		Shipments	
	1912	1911	1912	1911
Wheat, bushels.....	819,650	940,160	386,710	415,270
Corn, bushels.....	423,300	535,620	154,695	321,650
Oats, bushels.....	1,466,660	603,500	1,665,054	535,000
Barley, bushels.....	2,481,400	1,300,000	929,871	576,854

ELEVATOR AND GRAIN NEWS

ILLINOIS.

An elevator has been completed at Catlin, Ill.

A. M. Applegate has repaired his elevator at Pearl, Ill.

G. C. Tjardes' elevator at Emington, Ill., has been remodeled.

W. R. Turnbull has completed his elevator at Waverly, Ill.

The Palmer Grain Co. has succeeded Twist Bros. at Palmer, Ill.

The Warner Grain Co. of Harvel, Ill., is building a lumber shed.

Wyeth & Hardin have repaired their elevator at Charleston, Ill.

W. E. Kreider of Tonica, Ill., is building an addition to his elevator.

The Aldrich Grain Co. has succeeded C. C. Aldrich & Son at McLean, Ill.

The Davis Grain Co. of Smithshire, Ill., has built an addition to its office building.

William Huth has purchased the elevator at Lenzburg, Ill., from William Heap.

The Windsor Grain and Elevator Co. of Findlay, Ill., recently installed a grain tester.

The Steeleville Milling Co. of Steeleville, Ill., is increasing its grain storage capacity.

M. M. Shengler has leased his elevator at Bolivia, Ill., to the Bolivia Farmers' Grain Co.

A steel grain tank has been completed for the Turner-Hudnut Elevator at Parkland, Ill.

Hildebrand Bros. have purchased J. A. Ashton's elevator, grain and coal business at Emden, Ill.

The Farmers' Elevator Co. of Mattoon, Ill., will build an elevator to replace the one that was burned Oct. 25.

The A. E. Montgomery Elevator Co. of Moline, Ill., has awarded the contract for the erection of an elevator.

Dorney, Storckman and Schucken have purchased the elevator at Patton (R. F. D. from Mt. Carmel), Ill.

Frank Scott has traded his grain, coal and implement business at Sidney, Ill., to S. A. Long of Knox, Ind.

C. F. Meyers has rented the elevator of the Frankfort Elevator Co. at Frankfort, Ill., to G. L. Ullrich of Logansport, Ind.

John and Dayton Hanson have sold their interest in the elevator at Hayes, Ill., to James C. Roe, who is now the sole owner.

The Holcomb-Dutton Elevator at Chase (R. F. D. from Maple Park), Ill., has been remodeled and a new dump has been installed.

John Halsen has disposed of his interest in the Allendale Mill and Elevator Co. at Allendale, Ill., to J. Holsen and L. A. Kemp.

Amos Means has purchased an elevator at Holder, Ill., for \$4,110. The house was formerly owned by J. C. McCord and was sold at auction.

E. L. Merritt, formerly of Rossville, Ill., has purchased the elevator at East Lynn, Ill., formerly operated by the J. A. Mouch Elevator Co.

The Farmers' Grain and Coal Co. has awarded the contract for its elevator at Fogarty, three miles south of Lincoln, Ill. It will cost \$6,339.

The Central Illinois Grain Co. will rebuild the Lewis & Beggs Elevator that was recently destroyed by fire at Cody (R. F. D. from Springfield), Ill.

The Farmers' Elevator Co. of Sandwich, Ill., has completed its new house and electric motors have been installed. Frank O'Neil of Arlington, Ill., will manage the enterprise.

Surface & Packingham, Inc., have been incorporated at Granville, Ill., with a capital stock of \$2,500 to deal in grain. The incorporators are E. E. Packingham, Harry E. Surface and George W. Hunt.

An elevator will be erected on the electric line of the Illinois Traction System near Lincoln, Ill. The structure will have a capacity of 10,000 bushels and will be owned by the farmers of the community.

The Herron & Patterson Co. of Milford, Ill., has traded its elevator at Bryce (R. F. D. from Milford), Ill., to Edward F. Gore of Fowler, Ind., for property at Fowler. The elevator was valued at about \$24,250.

Twist, Lewis & Co. of New Berlin, Ill., have expended \$4,000 in improvements on their elevator. A steam plant was installed in a concrete room and an ear corn crib attachment is a new feature of the plant.

A. Warren Ford has sold his grain elevators, coal business and residence property at Scottsburg, Ill., to E. E. Amos. Mr. Ford has been engaged in the grain business for fifteen years but retires to remove

to Macomb, Ill., where he will reside during his term of office as circuit clerk.

The Supple Grain Co. has completed its elevator at Ogden, Ill. It has a capacity of 20,000 bushels. The house will be used for corn only and will increase the storage capacity at that place to 120,000 bushels.

The Home Lumber Co. has been incorporated at Libertyville, Ill., with a capital stock of \$20,000 to deal in lumber, grain, coal, etc. The incorporators are Robert C. Higgins, Egbert Robertson and Edgar L. George.

George L. Merritt of Rossville, Ill., in partnership with his nephew, William H. Weyerman, has purchased the new elevator at East Lynn, Ill., from J. A. Mouch. Mr. Weyerman will have active charge of the house.

The H. A. Hillmer Co. of Freeport, Ill., has awarded a contract to the Burrell Engineering and Construction Co. of Chicago for the remodeling of its elevator. New machinery will be installed throughout and electric power will be used.

IOWA.

An elevator is under course of construction at Yale, Iowa.

An elevator has been practically completed at Fulton, Iowa.

The Jackson Grain Co. is erecting an elevator at Nugent, Iowa.

The Farmers' Elevator Co. has built a corn crib at Lytton, Iowa.

J. A. Kiersch has sold his elevator at Mineola, Iowa, to John Konz.

The Farmers' Grain Co. of Maxwell, Iowa, has enlarged its corn cribs.

The Neola Elevator Co., of Neola, Iowa, will erect a 15,000-bushel elevator.

The Doud Milling Co. of Denison, Iowa, will erect a 40,000-bushel elevator.

The Farmers' Elevator Co. of Thor, Iowa, has installed a moisture tester.

Van Ordol & Co. have entered the grain and stock business at Rowley, Iowa.

W. K. Neill has installed an electric motor in his elevator at New Sharon, Iowa.

D. C. Peck of Primghar, Iowa, has built a brick engine house and installed a new engine.

Philip Leibson has purchased the grain business of C. L. Kinney at Grundy Center, Iowa.

E. D. Jones of Oxford, Iowa, has remodeled his elevator to handle his increased business.

The C. & N. W. R. R. has constructed a siding to the Blencoe Farmers' Elevator at Blencoe, Iowa.

G. S. Fuller of Denver, Colo., has purchased the Spirit Lake Flour Mill and Elevator at Spirit Lake, Iowa.

A Mr. McSweeney has traded his residence and elevator at Bolan, Iowa, for a farm near Cresco, Iowa.

The Gilbert Grain Co. has installed a new grain cleaner and a gas engine in its elevator at Gilbert, Iowa.

The Farmers' Elevator Co. of Eldridge, Iowa, will build an addition to its building at a cost of \$4,000 or \$5,000.

Arthur Snyder of Shannon City, Iowa, has traded his elevator to a Mrs. Muncey for a stock of furniture.

J. T. Cook is building an addition to his elevator office building at Allison, Iowa, to be used as an engine room.

The King-Wilder Grain Co. of Tipton, Iowa, has built a small elevator at Wald (R. F. D. from Stanwood), Iowa.

H. A. Schmitt, who recently purchased the C. & N. W. Elevator at Eldora, Iowa, has sold the house to John Barlow.

J. A. Tiedeman and E. H. Tiedeman have purchased Nicholas Tiedeman's interest in the elevator at Sioux City, Iowa.

A. M. Jasperson has removed his elevator at Algona, Iowa, from a site on the C., M. & St. P. tracks to one on the C. & N. W. R. R.

D. A. Evans has sold his elevator at Lohrville, Iowa, to Wright & McWhinney of Des Moines, Iowa, and will retire from the business about Jan. 1.

A farmers' co-operative company has been organized at Oyens, Iowa, with a capital stock of \$25,000. Magnus Scheff is president and John Wittkop secretary.

The Farmers' Grain and Seed Co. has been incorporated at Lamoni, Iowa, with a capital stock of \$25,000. J. P. Haas is president of the company and Oliver Hayer is secretary.

The Western Flour Mills Co. of Davenport, Iowa, has awarded the contract for the construction of four steel grain tanks, each with a capacity of 15,000 bushels. The structures will each have a concrete base 12 feet in height above the ground surface and

the steel work will rise to a height of fifty feet. A tunnel will connect the new tanks with the ones already in use.

The firm of Vorhes Bros. at Williams, Iowa, has been dissolved and B. F. Vorhes has purchased the business of F. C. Nichols at Liscomb, Iowa. The elevator at Brushy (R. F. D. from Williams), which formerly belonged to Vorhes Bros., will be operated by E. D. Vorhes, whose headquarters are at Webster City, Iowa.

The Atlantic Mill and Elevator Co. of Atlantic, Iowa, is contemplating a change from steam power to electricity. The company has operated its own electric lighting plant for some time, but it has now installed a power system in connection with the city's power house. If the experiment is satisfactory electric power will be used continuously.

OHIO.

I. L. Shaw & Co. have sold their elevator at Kansas, Ohio.

William Lutz plans to install a gas engine in his elevator at Lexington, Ohio.

The Powers Elevator Co. has installed an engine in its elevator at Martin, Ohio.

William Ludwig of Jackson Center, Ohio, has purchased the elevator at Moffitt, Ohio.

The Farmers' Grain and Seed Co. of Grelton, Ohio, will install a new cob burner in its elevator.

The Garman Grain Co. of Delphos, Ohio, expects to rebuild its house at Spencerville, Ohio.

The Co-operative Grain and Milling Co. of Tiro, Ohio, has been improving its power equipment.

Dr. R. C. Winbiger has disposed of his elevator and coal yards at Shelby, Ohio, to J. C. Morris.

The Keystone Elevator Co. of Keystone, Ind., has disposed of its house to D. M. Light of Greenville, Ohio.

The plant of the Pierceton Grain Co. at Pierceton, Ind., has been leased by Debolt & Niswonger of Savona, Ohio.

D. K. Hartzler, proprietor of the West Liberty Mills at West Liberty, Ohio, has purchased J. L. Mast's elevator.

O. Brumbaugh has sold the Louisville Mill and Elevator at Louisville, Ohio, to Miller & Sons of Sharpsville, Pa.

C. J. Hubbell is building an addition to his elevator at Ravenna, Ohio, in the way of a two-story concrete building.

The Heffner Grain Co. of Williamsport, Ohio, has installed a dynamo in its elevator and the plant will be lighted with electricity.

The Weavers Bros. Co., which operates elevators at Galion, Crestline and Vernon, Ohio, has taken over the Phoenix Mill at Crestline.

The Farmers' Grain Co. has been incorporated at Sandusky, Ohio, with a capital stock of \$25,000, and it has taken over the local elevator.

The Northwestern Elevator and Mill Co. of Mt. Vernon, Ohio, has constructed an office building of pressed brick in the rear of the mill.

Geo. B. Harmon of North Baltimore, Ohio, has bought the elevator of J. D. Arras & Son at Arlington, Ohio, and will take possession about Jan. 1.

A half interest in the North End Elevator at Arlington, Ohio, was recently sold at auction to J. A. Taylor of Findlay, Ohio, for \$800. The sale also included two lots adjoining the elevator site.

The Defiance Grain and Milling Co. of Defiance, Ohio, will install a corn cleaner and sheller. A corn crib will be built and later an elevator may be constructed. Motors will be added and the plant will be operated by electric power.

The Farmers' Grain and Coal Co. of Whiteville (R. F. D. from Matamora), Ohio, has opened its new iron-clad elevator. The building is 78 feet high and has a capacity of 20,000 bushels. The plant will be operated by a 50-horsepower gasoline engine and C. E. Otto will be in charge.

The Heffner Milling Co. of Circleville, Ohio, has erected a grain dryer of Sciotoville paving brick. Its dimensions are 28½x33 feet and it is 92 feet high, 80 feet being above the surface of the ground. The Richmond Mfg. Co. of Lockport, N. Y., is installing the system and the cost will approximate \$10,000.

The C., H. & D. Elevator at Toledo, Ohio, unloaded its first cargo of wheat recently when the steamer E. C. Pope received 143,000 bushels. This house is operated by the Lake Erie Elevating Co., which is controlled by Rosenbaum Bros. of Chicago. The local manager is G. D. Woodman. The company recently installed a marine leg.

The Fayette Grain Co. of Washington C. H., Ohio, is erecting another dryer, a boiler house and boiler room, which will increase the capacity of the plant to 500 bushels hourly. The addition will be 40x60 feet in size with a portion of it 85 feet in height and the remainder 65 feet. A 100-horsepower boiler was installed recently, bringing the power up to 200-

horsepower. The work will be completed about May 1.

Clark K. Hunsicker has disposed of his interest in the firm of Ballard B. Yates & Co. at Williamsport, Ohio, and has acquired the Red Elevator at Woodlyn.

The Gibsonburg Coal and Ice Co. of Gibsonburg, Ohio, is preparing to engage in the grain business, but an elevator will not be erected at present. A corn dump will be purchased and the grain buying will be conducted in connection with the coal business.

INDIANA AND MICHIGAN.

M. E. Hindman is building a 12,000-bushel elevator at Newberry, Ind.

Burrell & Kulp have discontinued business at Vicksburg, Mich.

The Bach Grain and Lumber Co. has been incorporated at Sebewaing, Mich.

Silver & Gezleschter of Huntington, Ind., are planning the erection of a small elevator.

The Oxford Grain Co. of Oxford, Ind., plans to build an elevator early in the spring.

The Omer Mill and Elevator Co. of Omer, Mich., has completed an addition to its plant.

C. K. Eddy & Sons have completed the construction of their elevator at Saginaw, Mich.

Banton & Kerr have taken over the Butternut Grain and Bean Co. at Butternut, Mich.

The elevator at Newcastle, Ind., has been purchased by its former manager, Alma Morris.

An addition is being constructed to the elevator at Elkton, Mich., to be used for bean storage.

The Lakeview Milling Co. of Lakeview, Mich., plans to erect an elevator in the early spring.

The Hale Elevator Co. of Hale, Mich., has purchased the elevator of the Michigan Cereal Co.

The See Grain Co. of Coleman, Mich., has been succeeded by the Coleman Grain and Lumber Co.

L. P. Thomas & Co. of Lowell, Mich., contemplate the installation of a bean drier in their plant.

The F. A. Mull Grain Co. has purchased the Kennedy & Gordon Elevator at Rays Crossing, Ind.

The McIvor Elevator Co. of McIvor, Mich., contemplates building a new elevator in the spring.

The Sandusky Grain Co. of Sandusky, Mich., has increased its capital stock from \$30,000 to \$100,000.

The Carsonville Elevator Co. has been incorporated at Carsonville, Mich., with a capital stock of \$15,000.

Theodore Lorig & Son of La Porte, Ind., have disposed of the La Porte Elevator Co. to an Ohio business man.

The Bellaire Farm Products Co. of Bellaire, Mich., is contemplating the erection of an elevator in the spring.

The Swartz Creek Grain Co. has been incorporated at Swartz Creek, Mich., with a capital stock of \$20,000.

The grain and feed business of McKain & Bagley at Decatur, Mich., has been taken over by Ray Graham.

A company of farmers has been organized at Elkton, Mich., with a capital stock of \$30,000, to erect an elevator.

The Farmers' Elevator Co. of Lochiel (R. F. D. from Fowler), Ind., has installed a 1,000-bushel grain cleaner.

Jordan & Evans of Raub, Ind., will remodel their elevator into a transit cleaning house and the capacity will be increased.

E. M. Light, formerly of Greenville, Ohio, has purchased N. S. Heckler's elevator, known as the Keystone, at Bluffton, Ind.

A 20-horsepower motor has been installed in the Burk Elevator at Decatur, Ind., to replace the gasoline engine formerly used.

The Michigan Milling Co. of Ann Arbor, Mich., has removed its warehouse from Owosso, Mich., to its plant at Vernon, Mich.

Harold Lawrence has disposed of his warehouses at Decatur, Mich., to Sol Schpok, who will continue the grain and coal business.

The Kirklin Grain Co., recently incorporated at Kirklin, Ind., has purchased an elevator of the Banner Milling Co., for \$13,500.

H. C. Clark and Charles A. Stevenson have purchased an elevator at Frankfort, Ind., from the Hirsch Bros. Grain Co. for \$16,000.

William Wrightsman of East Lynn, Ill., has taken over the two elevators and business of the Clinton Grain and Feed Co. at Clinton, Ind.

The Farmers' Elevator Co. of South Whitley, Ind., is building an addition to its elevator for the purpose of installing a corn sheller and other corn machinery.

The Mason Elevator Co. of Mason, Mich., has expended several thousand dollars in improvements. A new elevating system has been installed, also a

feed grinding mill and a bean house. The entire plant is lighted and operated by electricity.

The Gagetown Grain Co. of Gagetown, Mich., has completed the addition of a bean department and also the installation of a steam heating system.

The firm of Ellair, Huston & Co. of Detroit, Mich., has been dissolved by the death of Mr. Ellair and C. R. Huston will continue the business alone.

The Unionville Milling and Elevator Co. of Unionville, Mich., has been organized to take over and operate the mill and elevator at that place.

William and Ed. Wischart have purchased the site of Geo. T. Bowen's elevator which burned recently at Millville, Ind., and have begun the erection of a new elevator.

The Romeo Elevator Co. has been incorporated at Romeo, Mich., with a capital stock of \$10,000. The incorporators are William Gray, Jr., Joseph Bartholamew and William Gray.

The Brentcreek Elevator Co. has been incorporated at Brentcreek, Mich., with a capital stock of \$6,500. The principal stockholders are Thomas McNally and Edgar T. Wade of Montrose, Mich., and Frank McNally of Brentcreek.

MINNESOTA AND WISCONSIN.

An elevator may be erected at Glenwood City, Wis.

An addition is being constructed to the elevator at Almena, Wis.

A grain company is building a warehouse at New Auburn, Wis.

The Huhn Elevator Co. of Minneapolis has installed a drier.

The Woodworth Elevator at Sedan, Minn., has been opened for business.

Wright, Barrett and Stillwell will build an elevator at St. Paul, at a cost of \$1,700.

The Farmers' Elevator Co. of Delhi, Minn., has installed a new elevator in its house.

The Farmers' Elevator has been completed at Oklee (R. F. D. from Lambert), Minn.

The Twin City Trading Co. of Minneapolis has placed an order for a Morris Grain Dryer.

A co-operative company of farmers is being formed at Taunton, Minn., for the erection of an elevator.

J. W. Smith of Minneapolis is planning to erect an elevator at Rowena (R. F. D. from Wabasso), Minn.

George C. Christian & Co. of Minneapolis have taken out a permit to build three steel and concrete grain tanks.

Hubbard & Palmer, grain dealers at Mankato, Minn., have purchased the Geyerman Elevator at Brewster, Minn.

The Farmers' Elevator Co. has purchased the elevator at Hanley Falls, Minn., formerly operated by the Northwestern Elevator Co.

The plant of the Browns Valley Milling and Elevator Co. at Browns Valley, Minn., has been remodeled and is under new management.

M. Manchester of Viola, Minn., has purchased the elevator formerly owned and operated by the late J. F. Thompson of Plainview, Minn.

The American Society of Equity has purchased the Wood Elevator at Whitehall, Wis., and has begun operations with P. H. Johnson as manager.

The Farmers' Elevator and Fuel Co. at Austin, Minn., has been purchased by H. G. Baker, and the business will be continued under the name of the H. G. Baker Farmers' Fuel Co.

Hanson & Brazen of Thief River Falls, Minn., with George Marvin, have completed their new elevator at Warroad, Minn., which was opened for business Nov. 21, with Alonzo Toomb as buyer.

The terminal elevator to be erected by the State of North Dakota, the building of which was authorized by an amendment recently added to the Constitution of North Dakota, will be located at Superior, Wis.

The G. N. R. R. is said to be planning the erection of an elevator at Superior, Wis., at an expenditure of more than \$1,000,000, thereby affording that road a total warehouse capacity of approximately 15,000,000 bushels.

The Consolidated Elevator Co. is considering plans for increasing its storage capacity at Rice's Point in Duluth, Minn., by the erection of a 2,000,000-bushel elevator and by adding to the grain handling facilities of its "H" Elevator at the same point. It is proposed to call for bids upon them at an early date with a view to their being in readiness for service next fall.

The Witherspoon-Englar Construction Co. of Chicago has completed the new re-enforced concrete elevator at Milwaukee, Wis., for the C. & N. W. R. R. The work of driving the piling began in April and on July 8 the first concrete was poured for the foundation. It is said that ten tanks with a capacity of 500,000 bushels were constructed in fifteen working days. The John S. Metcalf Co. of Chicago

were the engineers. The plant consists of ten cylindrical bins, each with an inside diameter of 32 feet, together with four interspace bins, each erected on a heavy concrete foundation and surmounted by a re-enforced concrete gallery, extending the full length of the storage house. The new plant is connected with the working house by means of two concrete tunnels and a steel bridge. The walls of the storage bins are of re-enforced concrete 8 inches thick and 83 feet 4 inches high. The bottoms of the bins are hoppers, making them self-emptying.

WESTERN.

A farmers' elevator has been completed at Glendive, Mont.

Work is progressing on the concrete elevator at Holly, Colo.

M. D. Hoag has completed the Model Elevator at Forsyth, Mont.

The Imperial Elevator Co. has enlarged its elevator at Chinook, Mont.

The Rocky Mountain Elevator Co. has completed its house at Big Sandy, Mont.

The Valley Hay and Grain Co. of Fowler, Cal., has completed its new warehouse.

The Farmers' Elevator Co. of Valier, Mont., is erecting a 35,000-bushel elevator.

The Farmers' Co-operative Grain Co. has completed its crib elevator at Carpenter, Wyo.

The Oregon Building and Loan Association is erecting a 25,000-bushel elevator at Willow Creek, Mont.

The Fisher Milling Company and a company of farmers are building a 25,000-bushel elevator at Straw, Mont.

The warehouse of the Albion Local Farmers' Co-operative Union at Albion, Wash., will be remodeled into an elevator.

Smith & Co. of Boise, Idaho, contemplate purchasing a bleacher, a man-lift, elevator supplies and other machinery.

The Carver-Shadbolt Co., Inc., dealers in grain, hay, etc., at Wapato, Wash., has increased its capital stock from \$25,000 to \$100,000.

The Occidental Elevator Co. has completed its 40,000-bushel house at Acton, Mont., and W. H. Thomas has been placed in charge.

The Mabton Milling Co. of Mabton, Wash., is erecting a warehouse 40x80 feet in size, which will have a capacity of 15,000 sacks of wheat.

The Burley Milling and Elevator Co. of Burley, Idaho, is erecting a concrete grain bin seventy feet high and thirty feet in diameter, which will have a capacity of 46,000 bushels.

Somers & Co. have been incorporated at San Francisco, Cal., to deal in grain, hay, wood and coal. The capital stock is \$200,000 and the incorporators are Harvey C. Somers, Frank A. Somers, Roy I. Somers and Harry Stokes.

W. A. Finch and associates have completed a 48,000-bushel elevator at Townsend, Mont. The house is seventy feet high and is equipped with the most modern machinery. A carload of wheat can be discharged from the storage bins in twenty-five minutes. An attrition mill for grinding feed has been installed.

A number of farmers in the vicinity of Winona, Wash., are organizing a stock company with a capital stock of \$50,000. L. N. Peck is president and W. D. Marsh is secretary and treasurer. The company will build an elevator and warehouse on a site recently purchased. The warehouse will have a capacity of 25,000 bushels and the buildings will be completed in time for next year's crop.

At a recent meeting of the members of the Whitman County Farmers' Union at Colfax, Wash., it was decided to erect a line of warehouses in Whitman County with capacity to handle at least one-third of next year's wheat crop in bulk, the plan being for each farmer to purchase and use portable steel tanks in the harvesting of grain. About 250 members were present and a number of tanks were ordered. It was decided that it would be impossible to handle the entire crop in bulk the first year.

The California and Oregon Grain and Elevator Co. has awarded the contract for the erection of an elevator plant at Portland, Ore., involving the expenditure of between \$150,000 and \$175,000. The project includes the construction of a 12-story reinforced concrete building 60x100 feet in size and 17 re-enforced concrete grain bins, each 19 feet in diameter and 100 feet in height. The land to be occupied by the plant was leased from the Southern Pacific Co. about six months ago, and has a frontage on the river, where the Southern Pacific has docks which have been taken over by the elevator company. A large pipe, 100 feet in length, will extend from the tanks down to the harbor line for use in loading the grain into ships in the harbor. The tanks will be arranged in rows of six each and the intervening spaces will be utilized for five additional tanks, making a total of 17. They will have an aggregate

capacity of 250,000 bushels. The Portland elevator will be operated in conjunction with similar plants in other parts of the Coast, including San Francisco, Los Angeles, San Pedro and other cities.

Tom L. Fleming of Decorah, Iowa, is preparing to erect a number of elevators along the Lewistown-Grass Range and the Lewistown-Great Falls lines of the C. M. & P. S. R. R. in Montana. Mr. Fleming will make his headquarters and home in Lewistown.

In order to be in readiness for the expected increase of business which will follow the opening of the Panama Canal and at the same time to take care of the rapidly growing trade which is following the development of the arid lands east of the Cascade range, the Albers Bros. Milling Co. is constructing two large elevators at Seattle. The houses will have 36 bins and a capacity of 400,000 bushels and sacking bins with a capacity of 25,000 bushels. The plant, which covers a floor space of approximately ten acres, will be completed and ready for occupancy and operation by Jan. 1.

MISSOURI, KANSAS AND NEBRASKA.

Carter & Sisson have succeeded J. B. Carter at St. Edward, Neb.

A. F. Jasper has sold his business at Turner, Kan., to W. A. Retigo.

R. L. Miller has leased his elevator at Mayetta, Kan., to W. D. Kuhn.

The Farmers' Elevator Co. is building an elevator at Cawker City, Kan.

S. A. Hutchinson has practically completed his elevator at Strawn, Kan.

C. W. Glynn has constructed an addition to his elevator at Wellsville, Mo.

W. H. Perrine & Co. have disposed of the elevator at Gorin, Mo., to J. A. Gunnell.

The Oketo Mill and Elevator Co. of Oketo, Kan., has installed an electric light plant.

The Sylvia Grain and Supply Co. of Sylvia, Kan., has put a new engine in its elevator.

George Lamberson has succeeded the firm of Graves & Lamberson at Wayne, Neb.

The Farmers' Elevator Co., recently incorporated at Anoko, Neb., may build an elevator.

C. D. Jennings of Bucklin, Kan., has taken over the Miller Elevator at Kingsdown, Kan.

The Kelso Grain Co. of Mineral, Kan., has purchased the feed store of Dewey & Jackson.

J. D. Infield has completed the construction of a 14,000-bushel elevator at Wellington, Kan.

John Berry has built an addition to his elevator at Sherdahl (R. F. D. from Scandia), Kan.

A. T. Ragon, formerly of Lenapah, Okla., will conduct his business in Coffeyville, Kan., in the future.

E. H. Whitman and Arch McGilvray have bought the elevator at Mendon, Mo., from W. H. Perrine & Co.

Guthrie & Co., Superior, Neb., have sold elevators to the Corn Products Co. and the Superior Milling Co.

George Wetterhold has traded his alfalfa mill and elevator at Valley Center, Kan., for land in western Kansas.

The Farmers' Union Co-operative Association has purchased the elevator at Osborne, Kan., from B. S. Dockstader.

The Western Elevator Co. of Holton, Kan., has built a galvanized iron structure for its grain and feed business.

The Farmers' Elevator Co. of Smartville, (R. F. D. from St. Mary), Neb., contemplates the erection of an elevator.

The Nebraska Corn Mills Co. of Lincoln, Neb., has purchased the elevator of the B. & M. Milling & Elevator Co. at Adams, Neb.

The Foster Grain Co. of Lincoln, Neb., is out of business, having sold and leased all of its elevators to the Van Wickle Grain Co.

Emmett Berry of Bluff City, Kan., has purchased the elevator of the Kansas Flour Mills Co. at Derry (R. F. D. from Anthony), Kan.

The farmers' elevator under construction at Pickrell, Neb., will have a capacity of 28,000 bushels and will cost approximately \$10,000.

The Waterloo Elevator Co. of Waterloo, Neb., has purchased an elevator of the Omaha Elevator Co. at Waterloo and one at Valley, Neb.

Harry Heller has installed new engines, cleaning machinery and meal machinery in the elevator he recently purchased at St. James, Mo.

The White Water Milling and Elevator Co. is contemplating the installation of a new power plant in its house at White Water, Kan.

The Brock Grain Co. of Brock, Neb., has added a lumber yard to its grain business and will increase the capacity of its elevator 6,000 bushels.

E. W. Shields of the Simonds-Shields Grain Co. of Kansas City, Mo., will erect a four-story building at a cost of \$43,000. It will be of brick, stone, steel

and concrete construction and will be completed about May 1.

C. H. Culbertson has purchased a one-third interest in the mill, elevator and feed business at Montgomery City, Mo., of J. U. Marlow for \$12,000.

J. H. Brooks of Vandalia, Ill., has opened an office in St. Louis, Mo., and will conduct his business under the name of the Central Hay & Grain Co.

The Farmers' Elevator Co. has been organized at Douglas, Neb., and is considering the erection of an elevator. J. G. McPherson is president of the company.

The Empire Grain Co. of Fort Worth, Texas, has established an office in Wichita, Kan., with S. H. Ranson, formerly of the firm of Andrews & Ranson, in charge.

The Farmers' Mill and Elevator Co. has been organized at Concordia, Kan., with the following officers: M. Stensaas, president, and Anthony Nailleaux, secretary.

O. P. Ellis, manager of the Farmers' Elevator Co. at Ellis, Neb., will resign his position and engage in the business for himself. He will build an elevator at his new location.

E. M. Collins has bought the interests of his partners, W. Thompson and T. Burberry, in the firm of Thompson, Burberry and Collins at Seneca, Kan., and will operate the elevator alone.

Charles A. Geiger of Robinson, Kan., has purchased M. B. Cardwell's elevator business, which includes houses at Belvue, Rossville and Grantville, Kan. Mr. Geiger will remove to Topeka and handle the business from that point.

A. Fisher has disposed of his interest in the grain and poultry business at Edina, Mo., to W. T. Wilson of Monticello, Mo. Fisher's son, Fred Fisher, will be associated with Mr. Wilson and the firm name in the future will be Wilson & Fisher.

The Armour Grain Co. has leased the Santa Fe Elevator at Kansas City, Mo., and will operate it under the name of the Neola Elevator Co. W. B. Lincoln and J. A. Theiss will manage the company. Mr. Lincoln has been the Armour representative at Kansas City and Mr. Theiss has been manager of the Santa Fe Elevator. The house has a capacity of 1,000,000 bushels.

EASTERN.

A new elevator has been completed at Corinna, Maine.

Isaac Mack is building a grain and hay store at Brunswick, Me.

Ferdinand & French have completed a warehouse at Pittsfield, N. H.

J. E. Reed & Son have built an addition to their warehouse at Ashland, N. H.

C. A. Stone is building an addition to his grain warehouse at Oakville, Conn.

W. O. Gilbert has sold his hay and grain business at Lee, Mass., to E. W. Brayman.

The Champion Grain Co. has opened a flour and feed store at Mechanicsville, N. Y.

Wierman & Sheaffer are building an elevator at White Hill (R. F. D. from Camphill), Pa.

F. W. Foster & Son have improved their plant at Hill, N. H., and will use electric instead of gasoline power.

The grain driers in the elevators of the Baltimore & Ohio and the Pennsylvania railroads at Baltimore, Md., have been overhauled.

The Philadelphia Grain Elevator Co. of Philadelphia has overhauled and improved its grain drying apparatus at Port Richmond.

Five storage tanks with a combined capacity of more than 1,000,000 bushels were recently opened at Buffalo to relieve the congestion.

Charles Shaefer & Son of New York City have purchased the elevator and hay sheds of the Newark Grain and Hay Co. at Newark, N. J.

The Parks Bros. Co. has been incorporated at Skowhegan, Me., to deal in hay and grain. Mary Parks is president of the company.

E. Crosby & Co. are building an elevator and warehouse at Brattleboro, Vt., and it is anticipated that the plant will be complete by Jan. 1.

The Manning Co. has been incorporated at Sussex, N. J., with a capital stock of \$12,000 to deal in grain, etc. The incorporators are H. T. Manning and Roy Mills.

It is reported that Woods & Sprague of Albion, N. Y., will build a 100-barrel mill and a 20,000-bushel elevator. Power will be furnished by a 100-horsepower engine.

The Atlantic City Grain Co. has been incorporated at Atlantic City, N. J., with a capital stock of \$10,000. The incorporators are Harvey S. Justice, H. Frank Hobensack and William D. Redrow.

It is reported that Toronto grain shippers have taken an option on a site in Oswego, N. Y., on which they will build a terminal elevator and warehouse in preparation for the anticipated increase of busi-

ness following the opening of the Panama Canal. The consideration for the site is about \$50,000.

It is reported that a syndicate is contemplating the erection of elevators at Erie, Pa., to accommodate about 1,000,000 bushels of grain.

The Ferrisburg Hay and Grain Co. has been incorporated at Ferrisburg, Vt., with a capital stock of \$16,000. The incorporators are Nathan Oppenheim, M. D., Charles C. Field and Bertha Oppenheim.

The Sperry Milling Co., Inc., has been organized at Rochester, N. Y., with a capital stock of \$50,000 to deal in grain, feed, flour and seeds. The directors are Burton E. Sperry, Herbert Sperry and Howard E. Sperry.

The F. F. Woodward Co. has been incorporated at Fitchburg, Mass., with a capital stock of \$40,000 to deal in hay and grain. The incorporators are Frederick F. Woodward, F. Howland Woodward and Helen E. Woodward.

The Mansfield Coal and Grain Co. of Mansfield, Mass., has purchased the grain business of C. W. Upham at Foxboro, and will continue it under the name of the Foxboro Grain Co., as a branch office of the Mansfield Coal and Grain Co.

In connection with the 1,000,000-bushel elevator which James Stewart & Co. are building at Girard Point, Philadelphia, for the Pennsylvania R. R. Co. there will be a 3,000-bushel Morris Grain Dryer for drying corn. The capacity will be 60,000 bushels daily at normal moisture.

SOUTHERN AND SOUTHWESTERN.

Eaton & Oringderff have taken over the elevator at Lambert, Okla.

The Council Hill Grain Co. has been organized at Council Hill, Okla.

The Stevens-Scott Grain Co. has remodeled its elevator at Canton, Okla.

Sloan & Watkins have leased Ed. Staubaugh's elevator at Crescent, Okla.

The Elm Grove Milling Co. of Elm Grove, W. Va., is constructing an elevator.

E. M. Sowell of Mountpleasant, Tenn., is contemplating the erection of an elevator.

S. A. Rowland of Camden, Ark., contemplates the erection of a flour mill and elevator.

An addition has been constructed to the elevator operated by B. Rogers at Guymon, Okla.

J. W. Russell & Co. have purchased E. W. Bassell's grain business at Clarksburg, W. Va.

The Porter Grain Co. of Macon, Ga., has completed its two-story warehouse and will now handle feeds.

The Slidell Grocery and Grain Co. of Slidell, La., will erect a warehouse and cold-storage plant, to cost \$3,000.

John Wade & Son will build a fireproof warehouse adjoining their plant at Memphis, Tenn., at a cost of \$10,000.

The Alva Roller Mills at Alva, Kan., have awarded the contract for the erection of a 13,000-bushel elevator at Lodi, Okla.

The Kingfisher Mill and Elevator Co. of Kingfisher, Okla., has purchased W. B. Johnson's elevator at Hitchcock, Okla.

The People's Fertilizer and Grain Co. of Bay Minette, Ala., will erect a warehouse, to be used for storage purposes and machinery.

Stolz & Peterson of Galveston, Texas, are increasing their storage capacity by the construction of an elevator at a cost of approximately \$10,000.

A number of improvements have been made on the elevator at Chalmette, La., owned by the New Orleans Terminal Co., including the installation of a Hess Drier.

The Southern Grain and Provision Co. has been incorporated at Spartanburg, S. C., with a capital stock of \$8,000. The incorporators are Thomas L. Goff and J. Thomas Wright.

The Zona-Falfa Warehouse Co. has been incorporated at Phoenix, Ariz., with a capital stock of \$50,000 to deal in grain, seeds, hay, etc. The incorporators are K. S. Townsend, Mason D. Novinger and A. W. Costigan.

The Farmers' Grain and Supply Association has been incorporated at Gage, Okla., with a capital stock of \$5,000. The incorporators are W. C. McNeill, L. E. Moss, George R. Jenkins, C. T. James and W. W. Samford.

W. G. Jones and Percy L. Hedgecock have taken over the stock and business of P. R. Lamb & Co. at Winston-Salem, N. C., and the business will be conducted under the firm name of Jones & Hedgecock, dealers in mill feed, hay, grain, flour, etc.

The Westbrook Grain and Commission Co. of Pine Bluff, Ark., has erected a 25,000-bushel frame building for temporary use as an elevator. The walls of the structure are being used as the inside forms for the pouring of concrete walls which will enter into the construction of the permanent concrete elevator. One or two bins are constructed at a time in this

way, the remainder of the house being used for regular storage at the same time.

The Farmers' Elevator Co. has been incorporated at Pocasset, Okla., with a capital stock of \$6,000. The incorporators are C. W. Kelly, W. W. Clark, J. G. Miller, Joe Fray and S. O. Felton.

The Iowa Grain Co. has been incorporated at Oklahoma City, Okla., with a capital stock of \$25,000. The incorporators are J. C. Pearson of Marshall, Okla., D. D. Cottrell of Newkirk, Okla., William Hayton of Billings, Okla., and others.

The T. D. Lewis Grain Co. has been incorporated at Bessemer, Ala., with a capital stock of \$25,000. T. D. Lewis is president and W. B. Vines is secretary and treasurer. This company formerly conducted its business under the name of the Bonham-Lewis Grain Co.

The McAlester Mill and Elevator Co. of McAlester, Okla., is contemplating the enlargement of its business by the erection of elevators at Vinita and Wagoner, Okla., and the establishment of headquarters at Oklahoma City. The company will also engage in the feed business.

D. E. Hurst & Co., composed of D. E. Hurst of Ohio and Howard H. Hurst of Brooksville, Fla., have rented the warehouse at Brooksville and will engage in the grain and feed business. H. H. Hurst will manage the business at Brooksville, while D. E. Hurst will attend to the buying.

THE DAKOTAS.

A new elevator has been opened at Brinsmade, N. D.

An elevator has been constructed at Freda, N. D.

A new elevator is nearing completion at Hitchcock, S. D.

J. A. Wirkus has overhauled his elevator at Minto, N. D.

A new farmers' elevator has been opened at Morristown, S. D.

Morgan & Son of Tyndall, S. D., have installed a motor in their elevator.

Siberz Bros. & Craig are operating John Feick's elevator at Alpena, S. D.

The Shannard Elevator Co. has succeeded E. J. Wipf at Chancellor, S. D.

The A. A. Truax Grain Co. has sold its house at Corsica, S. D., to M. King.

The Madison Mill and Grain Co. has purchased the roller mill at Madison, S. D.

G. B. Olson has purchased the elevator at Egan, S. D., of the Cargill Elevator Co.

John Henning of Selby, S. D., has purchased the Sparks Elevator at Lake Andes, S. D.

The Farmers' Elevator Co. of Gwinner, N. D., has installed new machinery in its house.

The Bennett Grain Co. has completed an elevator at Oldham, S. D., and A. K. Houk is buyer.

An elevator has been completed at Comstock, a new town on the Soo line near Brinsmade, N. D.

The McCook County Elevator Co. has purchased the elevator of H. W. Schneider & Co. at Salem, S. D.

The Peoples' Elevator Co. has purchased the house of the Minneapolis & Northern Elevator Co. at Orr, N. D.

A 40,000-bushel elevator will be erected on the site of the one that recently burned at Fairdale, N. D.

The Whetstone Valley Elevator Co. has been incorporated at Wilmot, S. D., with a capital stock of \$25,000.

The National Malting Co. has leased the malting plant of the Dakota Malt and Grain Co. at Sioux Falls, S. D.

The Farmers' Shipping and Purchasing Co. of Artesian, S. D., is building a corn crib adjacent to its elevator.

The Davenport Elevator Co. of Davenport, Iowa, has leased the elevator at Kranzburg, S. D., from Anton Marx.

Math. Brown & Co. have completed their 40,000-bushel elevator at Wahpeton, N. D., and they are buying grain.

The Altamont Grain and Lumber Co. of Altamont, S. D., has taken over the elevator of the Western Elevator Co.

The Co-operative Claim and Grain Co. has been incorporated at Watertown, S. D., by E. Blankenburg, G. O. Farrel and C. L. Johns.

The Farmers' Elevator Co., recently incorporated at Hartland, N. D., has purchased the elevator formerly operated by J. L. Williams.

The Minnekota Elevator Co. has removed its house formerly located at Arndt (R. F. D. from Bisbee), N. D., to Southam on the Yorkville-Drake line of the Soo.

Geo. P. Sexauer & Son of Brookings, S. D., have purchased the two Hewett elevators at Arlington, S. D., from Adam Royhl & Co. The company plans

to dismantle the houses next year and to build a 25,000-bushel elevator to replace them.

Otto Schulz has sold the Independent Elevator at Washburn, N. D., to C. W. Gray of Underwood, N. D.

The Hawkeye Elevator Co. of Minneapolis has sold its elevator at Aggergard Spur (R. F. D. from Viborg), S. D., to Peter N. Aggergard of Irene, S. D.

Thomas H. Cousins has purchased the elevator at Carrington, N. D., formerly owned by the Consolidated Elevator Co. Mr. Cousins has been operating the house under a lease.

The new elevator of the New England Equity Exchange at New England, N. D., was opened on Nov. 18, in charge of Percy Dunn. New England now has five elevators in operation.

C. A. Richmond has disposed of the Bazar Elevator at Linton, N. D., to M. T. Barger. Mr. Richmond will remove to southern Minnesota, where he has purchased an interest in a line of elevators.

The McCaul-Webster Company has overhauled its elevator at Elk Point, S. D., and new machinery has been installed, increasing the capacity to 3,000 bushels. An extra corn dump has also been added.

The Dakota Grain Co. is building under contract 40,000-bushel elevators at Millerton, Nortonville and Sidney, N. D., all new towns on the Midland Continental Railroad running from Edgeley to Jamestown, N. D.

CANADIAN.

Work is progressing on the Atlas Elevator at Cudworth, Sask.

The Regina Grain Co., Ltd., has been incorporated at Regina, Sask.

The H. L. Grain Co., Ltd., is now established in its new quarters at Kerr-Robert, Sask.

Farmers in the vicinity of Cardston, Alta., have been organizing an elevator company.

It is reported that the Saskatchewan Co-operative Elevator Co., Ltd., will build fifty elevators in Saskatchewan.

B. J. Ostrander & Co. have engaged in the grain sacking and general warehouse business at Fort William, Ont.

The Wallbridge Elevator Co., Ltd., of Calgary, Alta., has applied for a change of style to the Wallbridge Grain Co., Ltd.

The Maple Leaf Milling Co. will construct a 600,000-bushel elevator in connection with its new mill at Medicine Hat, Alta.

The Taylor Milling Co., Ltd., of Lethbridge, Alta., has erected elevators at Coutts, Brant, Carmangay, Vulcan and Milk River, Alta.

The Campbell Flour Mills Co., Ltd., of Toronto, Ont., is building a 600-barrel mill and an 80,000-bushel elevator at Toronto Junction.

It is reported that the Western Elevator Co. will increase the capacity of its 1,000,000-bushel elevator at Fort William, Ont., to 2,000,000 bushels.

The new elevator and warehouse of the Early Grain Co. now under construction at Saskatoon, Sask., will be three stories high with a basement and will cost \$25,000.

The Manitoba and Ontario Milling Co., Ltd., will build a 350,000-bushel elevator in connection with the new plant to be erected at Medicine Hat, Alta., in the spring. The buildings will be of reinforced concrete construction.

The Canadian Pacific Railroad is said to have been seeking winter storage boats at Fort William, Ont., in which to store grain until spring. Its terminal elevators are filled and a practical embargo against grain shipments to Fort William exists along the line.

The Consolidated Elevator Co., Ltd., has purchased 400 feet of water frontage at Fort William, Ont., from the C. P. R. and will erect an elevator on the site with a capacity of 2,000,000 bushels. The location is near the site of the company's present elevator.

The Georgian Bay Elevator Co. has been incorporated with a capital stock of \$100,000 and offices at Meaford, Ont., to build a transfer elevator at that place. The provisional directors are G. W. Mason, F. C. Carter, C. G. French, W. A. McCarthy and W. H. Beatty of Toronto, Ont.

CORN BELT MOVES NORTH.

A correspondent at Grand Forks, N. D., writes an Eastern paper that the "shifting northward of the corn crop zone was the distinctive feature of the 1912 crop season in North Dakota, aside from the production of a bumper crop. The increase in acreage was unprecedented, a total of 500,000 acres being sown, an increase in two years of approximately 100 per cent. Crop experts predict another big advance next year. Increased dairying activities and the growing of stock by farmers is responsible for the shifting northward of the corn belt."

[Special Correspondence.]

TRADE NEWS FROM TOLEDO AND OHIO.

BY E. F. BAKER.

TOLEDO, O., Dec. 10.—Chief Inspector Culver reports a great improvement in the quality of corn within the past few days as shown by the moisture tests. The cold weather is putting things in good shape by removing the moisture rapidly. Last year, Chief Culver says, corn was grading sample and No. 4 for the corresponding period, while this year more than 50 per cent of it is grading No. 3 or better. Corn is not coming into the local market very readily, as quotations on the Toledo market are low and farmers are inclined to hold their product for better prices.

Toledo is in good shape, so far as grain stocks are concerned. Wheat stocks increased last week 226,729 bus. to 1,729,837 bus., the contract total being 782,965 bus. Corn increased 24,430 bus. to a total of 40,133 bus. Oats decreased 40,467 bus. to a total of 360,002 bus. Wheat receipts for the week amounted to 171,000 bus.; corn receipts 128,800 bus.; oats receipts, 37,500 bus. The week's shipments are as follows: wheat 33,900 bus.; corn 66,200 bus.; oats 64,400 bus.

The Toledo market on wheat is still running above the Chicago market, cash wheat closing today at \$1.05½. Cash corn was quoted at 49½ and cash oats at 35½.

Navigation has closed. The last boat was in today with a cargo of flax seed. The car shortage is somewhat lessened, although the yards are in bad shape, owing to the inability of the Northern roads to handle cars. The lack of ward space at Detroit making it impossible to care for cars at that point, has made Toledo a sort of dumping ground, and this city is compelled to take care of cars which cannot be forwarded to Michigan points, thus congesting the local yards and making Toledo a sufferer along with Detroit where alone the blame for the situation lies. The New York Central Railroad seems to have its lines fairly clear but most of the other roads are still in more or less bad shape.

Notwithstanding an early report that but little wheat would be planted in this section next year, owing to the bad crop this season, the planting has been fairly heavy and the young crop is in fair shape. There is some complaint of a bug called by local farmers a "wheat louse" which is doing some damage.

Corn in this section has been pretty well husked and the weather conditions have been unusually good. Farmers are already plowing for corn and oats, a very rare occurrence "in these parts." This plowing usually has to be done in the spring, as farmers are unable to get around to plowing in the fall before freezing. Next season's plowing will mostly be over this fall, and the fields will be ready for the harrow in the spring and crops should get an early start.

Taken altogether there is little to complain of in the local situation and the outlook is good.

Charles A. Hardy of Defiance, O., has taken a position with the Defiance Grain & Milling Co.

The Farmer's Mercantile & Elevator Co. of Lindsey, O., is putting in a private sewer to carry off the water from the cellar of the elevator.

A complete equipment of motors has arrived for the plant of the Defiance Grain & Milling Co., at Defiance, O., which is expected to be in operation with electric power by the first of the year.

George Bailey of E. W. Bailey & Co., large flour, feed and grain merchants of Montpelier, Vt., was a recent visitor on the floor of the Produce Exchange. His firm does considerable buying from the Toledo market.

The Toledo Grain & Milling Co.'s new elevator will be completed about the first of the year, according to present prospects. Machinery is being placed now. The elevator will provide space for about 350,000 bus. of grain.

The Pilliod Milling Co., at Swanton, O., was recently burglarized. The thieves entered through the engine room and worked a way through many crooks and turns to the first floor of the mill. The safe was unlocked and the strong box was cut out and carried away. The safe was practically ruined, but the thieves secured only \$5 for their pains.

H. D. Raddatz has returned from a short business trip to New York City. He reports that the car situation throughout the East is more serious than in Toledo. He says that the Eastern opinion is that the shortage is not so much due to an actual shortage of cars as to a shortage of operatives, it being asserted that the railroads have not sufficient employees to keep the cars in continuous service. Scores of empty cars are said to be standing idle on Eastern sidings.

First car of No. 2 yellow corn of the season was received at Chicago on November 15. It came from Reddick, Ill., tested 15.80 per cent moisture, and was sold by Lynch & McKee at 56½c, or about 1½c under the price of old.

THE EXCHANGES

The Duluth Stock Exchange died officially on November 16, owing to lack of support by the public.

La Salle Street Trust and Savings Bank has been made a depository for margins under the rules of the Chicago Board of Trade.

The Chicago Board of Trade Mutual Benefit Association is growing rapidly, and memberships are now worth to beneficiaries \$3,050.

The Kansas City Hay Dealers' Association is contemplating the organization of a hay exchange, with a building owned by the Association.

The Peoria Board of Trade has installed moisture testers to handle 48 cars of corn per hour. Under the rules all inspection certificates must state the moisture content.

Chicago grain receivers are circulating a petition to the directors of the Board to make carloads on track deliverable on contracts during the last four days of delivery months.

The Cincinnati Chamber of Commerce has rented temporary quarters in the new Union Central Building, where two floors will be occupied until the Chamber's own building is completed.

The Chicago Board of Trade officials are supporting Patrick O'Connor for the succession to W. S. Cowen as chief grain inspector of Illinois, and recently waited on Gov.-Elect Dunne to urge his appointment.

The Hay and Grain Exchange of the Cincinnati Chamber of Commerce has practically unanimously adopted the principle of compulsory arbitration of commercial disputes in which the members are interested, and a committee composed of H. Lee Early, C. S. McGuire and F. F. Collins has been appointed to investigate the subject and test the sentiment of the Exchange and of the Chamber as a whole.

OMAHA ELECTION.

The Omaha Grain Exchange on November 13 elected the following directors: Elmer E. Cope, A. H. Bewsher and F. S. Cowgill for a term of three years to succeed E. P. Peck, C. E. Niswonger and M. C. Peters.

On November 20 the directors elected J. W. Holmquist, head of the Holmquist Elevator Company, president, to succeed Edward P. Peck. J. W. Hynes and John A. Cavers were elected vice-presidents; Sherman Saunders, treasurer; and E. J. Manchester, secretary.

BOSTON GRAIN BOARD.

On December 4 the grain merchants connected with the Boston Chamber of Commerce met and organized themselves as a body within the Chamber under the Chamber rules provided for such bodies. Walter E. Smith presided and two committees were chosen. The executive committee was organized with Howard A. Cross as chairman. The nominating committee chosen consisted of Arthur W. Glines, Charles M. Cox, Frank M. Wise, Ernest E. Rogers and M. D. B. Benzaquin. This committee was due to report on December 13, as this paper goes to press.

BUFFALO VISIBLE.

After a personal visit to Buffalo to urge the reform system, Secretary Merrill of the Chicago Board of Trade on November 16 gave out the following notice referring to the "visible supply" at Buffalo:

"Heretofore when the carriers have received and countersigned shipping orders, which operates to stop storage and insurance charges, they enter such orders as shipped grain, regardless of time same is actually loaded, and shows as in store the net quantity remaining on storage.

"It is desirable that the public take note of this change and make due allowance for the apparent increase in the published stocks of wheat.

"The grain afloat in Buffalo harbor is included in the item published as 'on the lakes'; therefore all grain at Buffalo will be included in the report."

MILWAUKEE CHAMBER MATTERS.

Since November 1 the "call board" has met daily at noon and also after the close. On Saturday one call is held, at the close. The various grades of cash grain are included in the call, and the members are showing sufficient interest in it to warrant a continuance of the present program.

The rate of interest on advances during the month of December has been 6 per cent per annum as fixed by the Committee on Finance.

F. C. Reynolds and P. C. Kamm represented the Chamber of Commerce at a meeting of the National Rivers and Harbors Congress held at Washington, D. C., December 4, 5 and 6, 1912.

The board of directors of the Chamber thought that the great lakes cities should show more interest in the session of this Congress, and directed the Secretary to correspond with commercial organizations in those cities with a view to stimulating interest and increase the attendance from the lake

region. Replies received from many of these organizations expressed a desire to co-operate with the Milwaukee Chamber, and the Milwaukee Chamber was requested to furnish data showing the amount of freight shipped by both rail and lake to Lake Erie ports and other points further east, and also the amount of freight shipped from those points to Milwaukee. This request was made by a board of government engineers, who are investigating the practicability of constructing a canal to connect Lake Erie to Lake Michigan.

The members of the Chamber of Commerce will shortly ballot upon an amendment to the rules which will give members of the boards of arbitration and appeals terms of two years instead of one year as at present provided for. Portions of these boards will be elected each year, thus insuring the services on those boards at all times of men who have had at least one year's experience.

CHANGES IN EXCHANGE MEMBERSHIP.

Baltimore.—Secretary Hessong reports that Mr. Geo. P. Cronise has been elected a member of the Chamber of Commerce, and that certificate of Fred. J. Aspelmeier was transferred.

Chicago.—Secretary Merrill reports the following changes in the membership of the Chicago Board of Trade in November: New Members—Herman D. Lapp, Thomas H. Foster, Gus K. Worms, Chas. G. Fox, Wm. A. Hutton, Jas. A. Bocock, Jno. J. Tracy, Warren W. Watson. Transferred—E. Lawrence, John H. Morrell, Wm. D. Card, Wm. Lorimer, Jr., Est. of J. Schwabacher, Alva E. Bocock, Est. of Henry G. Vogel.

Duluth.—Secretary Macdonald reports the following new members admitted to the Duluth Board of Trade during the month of October: B. F. Stone, E. P. Bacon and J. J. Quinn, and withdrawn, Nels Olson.

Duluth.—Sec'y Macdonald reports that Louis Hanson has been admitted to membership on the Duluth Board of Trade and that C. M. Owen withdrew.

Memphis.—Secretary N. S. Graves reports that during the month of November the Hannah Distributing Co. of Jackson, Miss.; Louis C. Ehle, president of the L. C. Ehle Oil Mills, Chicago, and the Lehman Johnson Laboratory of Memphis were admitted as members to the Memphis Merchants' Exchange. There were no withdrawals during the past month by members engaged in the grain trade.

Milwaukee.—Sec'y Plumb reports that during the past sixty days the following changes in membership in the Chamber of Commerce have been made: New members—Frank B. Hoag, C. W. Hall, D. V. Hess, Vernon E. Butler; transferred—B. L. Simmons, Otto E. Schulz, John W. Stone, Carl E. Hansen.

Minneapolis.—Statistician Moore reports the following changes in membership of the Chamber of Commerce during October and November: Firms admitted—Everett-Aughenbaugh & Co., Northwest Grain & Seed Co., Fruen Cereal Co. and Minneapolis Barley Co., Walter Stern, O. H. Erickson, J. T. McGlynn, Lewis H. Clough, Jr., Hugh R. Campbell, and Felton D. Gill.

Peoria.—Secretary Lofgren reports that W. S. Reyburn, insurance, and E. R. of S. C. Bartlett & Co., grain commission, have been admitted to membership in the Board of Trade on certificates of A. F. Johnson and S. C. Bartlett, respectively.

VOTING ON NEW RULES AT ST. LOUIS.

On Monday, December 16, a vote of the members will be taken on the following amendment and additions to the rules of the Merchants' Exchange of St. Louis:

To amend Section 8 of Rule XIII so that as amended said Section 8 will read as follows (the new portion is in **bold face**):

"In case a certificate of membership is lost or destroyed, and application is made to the Board of Directors for a duplicate thereof, the Board shall require the applicant to file an affidavit with the Secretary, stating that the certificate is lost or destroyed, as the case may be, and had not been assigned, or, if assigned by pledge or otherwise, the name of the party to whom it had been assigned, also to advertise the loss or destruction of such certificate, giving the number and date, in one of the daily newspapers published in the City of St. Louis, for two weeks. The Secretary shall also post such a notice in the Exchange room for same length of time. If, at the expiration of the time specified, no information is received in reference thereto, the Board shall order the issue of a duplicate certificate. Such duplicate certificate shall bear upon its face the endorsement that it is issued as a duplicate for the original of given number and date lost or destroyed, and is to become void on the presentation of the original duly endorsed, provided the original certificate has been preserved in good standing by payment of assessments as provided by Section 6 of this Rule.

"In the event of non-payment of dues on the original certificate covering two consecutive years from date of the first duplicate, the Board of Directors shall order the issue of an original in lieu of the existing duplicate, provided the duplicate has been preserved in good standing by payment of

assessments as prescribed by Section 6 of this Rule.

"In the event of the presentation of the duplicate for transfer, a similar condition shall be endorsed upon the face of the new certificate, and such endorsement shall continue on each certificate until such time as the above provision operates to convert the duplicate into an original."

For the adoption of the following paragraphs to be known as Paragraphs 4 and 5 of Section 6 of Rule VIII:

Paragraph 4. "On all grain received and inspected at St. Louis and sold and delivered to an industry in E. St. Louis, and on all grain received and inspected at E. St. Louis and sold delivered to an industry in St. Louis, the buyer shall pay the second inspection."

Paragraph 5. "On all grain, hay, straw, or mill feed sold for unloading at St. Louis, E. St. Louis or other points where Merchants Exchange Weighing supervision prevails the cost of weighing shall be paid by the seller provided such cost does not exceed One Dollar per car. Any cost in excess of One Dollar per car to be borne by the buyer."

CANADIAN WHEAT FUTURES.

On December 3 the grain trade section of the New York Produce Exchange adopted unanimously the rules below regulating trading on the floor in New York in futures for Canadian wheat; and such trading will begin on January 2, 1913. The rules were prepared by Frank I. Maguire, William M. McCord, William Knight, William H. T. Moore and William J. Brainard, and were passed upon by the regular grain committee, of which A. C. Field is chairman. The rules are as follows:

"Rule 40, known as special rule regulating transactions in bonded wheat for future delivery, wherever the term 'Bonded Wheat' is used, it will be understood as meaning 'Canadian Grown Wheat,' in bond, at the port of New York. All such wheat to be of Dominion of Canada official inspection as to grades. All offers to buy or sell bonded wheat for future delivery shall be in lots of 5,000 bushels, or multiples thereof, unless otherwise stipulated. Lots of less than 5,000 bushels shall not establish an official quotation.

"The following grades of bonded wheat are deliverable on contracts for future delivery:

No. 1 Northern Flat
No. 1 hard At a premium of 1c per bushel
No. 2 Northern At a discount of 3c per bushel
No. 3 Northern At a discount of 8c per bushel

"These premiums or discounts are subject to change by the committee on grain so as to conform with any change made in premiums or discounts in the Canadian markets.

"It shall be the duty of the inspector-in-chief, or his deputies, to inspect as to condition, and supervise the weight of all bonded wheat going into store or afloat in the port of New York. He shall inspect as to condition and supervise the weight of all bonded wheat delivered from store, elevator or afloat, and furnish a certificate as to condition of such grain, as per the following form:

CERTIFICATE OF EXAMINATION.
No. bushels and pounds
Produce Exchange Grain Inspection.
New York,, 19...

I hereby certify that I have this day completed the examination of bushels and pounds of bonded wheat which arrived via and billed out of as Canadian wheat ex and found the same to be

Stowed in Identity preserved.
..... Inspector-in-chief.

For account of

"It shall be the duty of the party delivering bonded wheat from store, elevator or afloat, to furnish to the party receiving such wheat a certificate from the common carrier, (in case same is requested) stating that said wheat is covered by proper T. & E. bond and on file at this port.

"The rules governing the trade in domestic grain shall govern the trade in bonded grain except in so far as the special rules provide."

NATIONAL ASSOCIATION DIRECTORS.

Chairman Reynolds has called a meeting of the legislative committee of the Grain Dealers' National Association to be held at the La Salle Hotel, Chicago, on Monday morning, December 16, at 10:30 o'clock. It is probable that J. W. McCord, chairman of the executive committee, Chas. D. Jones, president, and a representative of the Council of Exchanges will meet with Mr. Reynolds, chairman, Mr. Grimes, Mr. Wells, Mr. Cornelison and Mr. McCaul, of the committee.

At the same time and place President Jones has called an emergency meeting of the directors to confer and advise with the legislative committee on the policies which shall govern the legislative campaign on Federal inspection and trading in grain for future delivery.

W. R. Guyer of Abingdon, Ill., will have charge of the elevator and lumber yard at Gilson, Ill.

ASSOCIATIONS

C. and J. M. Strong, Wellington, and Barkemeyer Grain Co., Floydada, Texas, are new members of the Texas Association.

The annual meeting of the Illinois Farmers' Grain Dealers' Association will be held at Jacksonville on February 19-21.

The annual meeting of the Farmers' Grain Dealers' Association of Iowa will be held at Sioux City on February 11-13. On Lincoln's birthday, February 12, a patriotic program will be given.

A local meeting of members of the Kansas Grain Dealers' Association was held at Marysville on November 16. The most important topic of general interest was the State grain inspection law and its revision.

The Indiana Grain Dealers' and the Indiana Millers' State Associations will hold a joint meeting at the Board of Trade Building, Indianapolis, on January 21 and 22. At that time there will be a prize grain contest, the Board of Trade having appropriated a liberal sum of money with which to pay cash prizes.

The 20th annual meeting of the National Hay Association for 1913 will be held at Peoria, but the association members are now voting on a date to be named; or, rather, are asked to express a preference of a date. All members who have not returned to Secretary Taylor a card expressive of preference should do so promptly.

A local meeting of Iowa dealers was held at Sioux City on November 15. Practical matters—moisture tester, and mutual insurance in particular—were discussed. A dinner in the Hartin Hotel grill room closed the conference. E. A. Fields, president, was toastmaster. Brief addresses were made by C. H. Thayer and J. W. Radford of Chicago.

The Farmers' Co-Operative Grain and Live Stock State Association of Nebraska will meet in Omaha, December 16, 17 and 18, at the Hotel Rome. J. W. Newell of the Burlington system, Chicago, will address the convention on the subject of the losses of grain in transit. The Union Pacific will also delegate a speaker to talk on the car shortage problem.

The elevator men at Ft. Williams and Port Arthur on November 26 took steps to form a Grain Shippers' Association, to protect their interests, which they claim have been jeopardized by the strike of the C. P. R. clerks. When the Association takes concrete form it is probable that a complaint will be lodged with the Grain Commission and the railway Board.

Secretary C. B. Riley reports the following new members added to the roll of the Indiana Association since last report. Shippers—LaFayette Hominy Mill Co., LaFayette; Haller & Walker, Eaton; Sullivan Mill & Elevator Co., Sullivan; Thorntown Grain Co., Thorntown; W. W. Evans & Son, Otterbein; McConnell & Messner, Atkinson; Kirkpatrick Bros., Raub; Sheridan Milling Co., Sheridan; E. N. Cook, Plymouth; George R. Ogden, Milford; J. E. Deaton, Sidney; W. H. Williams, Jr., Selma; Covington Grain Co., Covington; Princeton Milling Co., Princeton; Edgar Thompson, Brownsburg; Brown- ing & Co., Alexandria; Harrington Bros., Co., Rensselaer; Edwin Harris, Mount Ayr; Stevenson & Clark, Frankfort; Nathan Grain Co., Fort Wayne. Receivers—Union Grain & Hay Co., Cincinnati; Burns Grain Co., Buffalo; J. S. Lapham & Co., Detroit; Miller Grain Co., Indianapolis; Richardson Bros., Philadelphia.

INDIANA GRAIN DEALERS' ASSOCIATION

A joint meeting of the Indiana Grain Dealers' and the Indiana Millers' State Associations will be held at the Board of Trade Building, Indianapolis, on January 21 and 22. The special feature of this meeting will be the annual Grain Contest for the prizes offered by the Board of Trade.

ILLINOIS DIRECTORS MEET.

In addition to arrangements for the convention next June, mentioned in another paragraph in this department, the board of directors of the Illinois Association approved the applications of 57 new members, all of whom have been reported, except the following: Simpson & Perry, St. Joseph, Ill.; Rossville Grain and Coal Co., Rossville, Ill.; J. R. Hale & Sons, Nashville, Tenn.; Hamman & Murray, Roberts, Ill.; Campbell & Ashmore, Kansas, Ill.; A. M. Eastburn & Co., Sheldon, Ill.; C. B. Munday & Co., Litchfield, Ill.; Beach-Wickham Grain Co., Chicago; Moore Bros., Blue Mound, Ill.; Swearingen & Walker, St. Joseph, Ill.

The directors adopted a resolution condemning the Corn Exchange of Buffalo, N. Y., for increasing the commissions on corn and oats; approved the reports of the scale committee and claims committee of the Association; approved the action of the committee opposing increase of freight rates on grain in Illinois, and directed them to continue their efforts in the same direction; accepted an invitation from the Chicago Board of Trade, with a "whoopie," to

hold the twentieth annual convention next June in Chicago.

The secretary made a report on finance, which, as usual, showed a fat balance.

They passed a resolution recommending Mr. Patrick O'Connor to Governor-Elect Dunne for Chief Inspector of Grain.

Everything is in good shape.

Those in attendance were President Lee G. Metcalf; directors, W. L. Shellabarger, Decatur; H. A. Hillmer, Freeport; H. T. Truby, Joliet; U. J. Sinclair, Ashland; G. W. Cole, Bushnell; R. J. Railsback, Hopedale, and Secretary S. W. Strong, Urbana.

ILLINOIS MEETING AT CHICAGO.

At a meeting of the board of directors, held in the La Salle Hotel, Chicago, on the 4th instant, an invitation was read from the Chicago Board of Trade inviting the Illinois Grain Dealers' Association to hold its twentieth annual convention in the city of Chicago, and stating that they had appointed the following as a committee on arrangements to arrange for the convention if the invitation was accepted: Adolph Gerstenberg, B. S. Wilson, Edward Hymers, J. H. Raleigh and E. N. Combs.

The board of directors of the Association, by motion unanimously adopted, accepted the invitation of the Chicago Board of Trade, and fixed the meeting place for the twentieth annual convention of the Association at Chicago on June 3rd and 4th, 1913. President Metcalf and Secretary Strong were instructed to take such action as was necessary to secure proper headquarters and assembly room for the convention.

Arrangements were made with Earl L. Thornton, assistant manager of Hotel La Salle, for holding the convention in that hotel in the Red Room on the nineteenth floor of the hotel.

NEW MEMBERS OF THE NATIONAL.

The campaign for new members of the National Association is being prosecuted with vigor, and thus far since the annual meeting more members have been added than ever before at the same period. Since the Norfolk convention 54 names have been added to the list as against eight in the same time after the Omaha convention. New names added since last publication are as follows:

Cairo, Ill.—Magee Grain Co.
Des Moines, Ia.—S. E. Squires Grain Co.
Greenwood, S. C.—Durst-Andrews Co.
Lima, Ohio.—The Ward Grain Co.
Nashville, Tenn.—John C. Bennett & Co., Alex. C. Harsh & Co., Liberty Mills, Harry Williams.
Perry, Fla.—The Perry Grocery Co.
Statesville, N. C.—Statesville Flour Mill Co.
Trinidad, Colo.—The Bancroft & Marty Feed and Provision Co.
Wichita, Kan.—Independent Grain Co.
Indianapolis.—Mutual Grain Co.
Memphis.—Yates & Donelson Co.
New Sharon, Ia.—W. K. Neil.
Paton, Ia.—Farmers' Elevator Co. and John Ristredt & Son.

NO GRAIN INSPECTION APPEAL COMMITTEE.

Secretary Courcier of the National Association on November 15 sent the following to the trade press: "Gentlemen: I am directed by the president to say that there will be no grade appeals committee appointed during the current convention year.

"This was decided by a referendum vote of the officers and directors of the Association. President Jones was almost unanimously instructed not to appoint this committee, but to hold the matter in abeyance to be presented to the next convention.

"The decision not to name a grade appeals committee at this time was prompted by a letter written to the board of directors by A. E. Reynolds, chairman of the legislative committee of the Grain Dealers' National Association. In this letter Mr. Reynolds suggested to each director that President Jones be relieved of the duty because the existence of a grade appeals committee might embarrass and handicap the labors of the legislative committee during the coming year.

"This action of the directors has, for one year at least, disposed of the resolution passed at the sixteenth annual convention of the Grain Dealers' National Association, at Norfolk, Virginia, October 3, 1912, reading as follows:

"Resolved, That a committee of three be appointed by this association to be known as 'the grading appeals committee,' on complaints arising from the misgrading of grain, whose duty it shall be to receive and pass upon all complaints that may be submitted to them, arising from the above cause; be it further

"Resolved, That when in the judgment of this committee, a member has just cause for complaint, said member may recover from the party with whom the contract was made for all damages by reason of such errors; be it further

"Resolved, That this committee be directed to formulate such rules as may be necessary to carry out this resolution subject to the approval of the board of directors."

COMMISSION

The Belhaven Grain & Commission Co., of Belhaven, N. C., has been incorporated with a capital stock of \$10,000 by C. C. Smith and others.

Walter P. Bishop, president of the Milwaukee Chamber of Commerce, will attend the first annual meeting of the Chambers of Commerce of America to be held in Washington, D. C., January 21, 1913.

B. S. Wilson & Co., of Chicago, Ill., have opened a branch office in Sheldon, Ill., for the purchase of grain, seeds and provisions. Offices will be in the Frisbie Block and C. M. Anderson will be in charge.

Clarence A. Euler of C. A. Euler & Co., grain and hay merchants of Baltimore, Md., who has been absent from business the past few months on account of ill health is again at his accustomed place in the office and on 'change.

Messrs. S. G. Courteen, P. P. Donahue, A. K. Taylor, F. C. Reynolds, and A. L. Kern represented the Milwaukee Chamber of Commerce at the National Rivers and Harbors Congress held December 4, 5 and 6 at Washington, D. C.

The Louis Muller Company of Baltimore, Md., grain receivers and exporters, shipped a cargo of oats recently aggregating 529,118 bushels. It was said to be the largest cargo of oats that ever cleared from a United States port.

A. D. O'Neill, recently treasurer of the Erie Company operating the Erie Elevator at the Jersey City Terminal, Jersey City, N. J., has become general manager of the Long Dock Mills and Elevator Co. at New York City to succeed Geo. C. Brinkerhoff, who resigned.

Charles England, Louis Muller, Douglas M. Wylie and Robert Ramsey Law have been appointed to represent the Baltimore Chamber of Commerce at the annual meeting of Chambers of Commerce of the United States of America, to be held in Washington, D. C., commencing January 21, 1913.

The grain business of W. H. Morehouse & Co. of Toledo, Ohio, of which the founder, W. H. Morehouse died recently, will be continued by Frank W. Annin. Mr. Annin has been with the firm for the past ten years. He is an expert grain man and has ample funds and facilities for carrying on the business.

The firm of Piper, Johnson & Case of Minneapolis, Minn., will be dissolved by limitation on January 1. The company will then be reorganized and will continue in business under the firm name of Johnson, Case & Hansen Co. The members of the new firm will be Denman F. Johnson, George P. Case and Edgar T. Hansen.

Theodore H. Waterman, who has been for a number of years prominently identified with the Chicago Board of Trade as a buyer of cash wheat, has sold his membership in the Board. In September, 1909, and in July, 1910, Mr. Waterman's holdings of wheat aggregated millions of bushels. It was his invariable custom when buying wheat to pay cash for it and market it.

W. T. Hacker recently purchased a membership on the Wichita Board of Trade, Wichita, Kan., and opened an office in Room 209 Board of Trade Building, where he will carry on a general wholesale and commission business in grain and feed. E. M. Flickinger will assist in the general supervision and management of the office. Mr. Hacker will retain his grain, lumber, coal and other interests at Elmo and Carlton.

Wedding bells will ring this month for James Williams Wayman who will be married December 26 to Miss Margerie Francis Wing at Detroit, Mich. Mr. Wayman is a son of James B. Wayman who is connected with the firm of Crighton & Losier of Chicago. Miss Wing is the daughter of E. C. Wing, a former grain merchant and member of the Board of Trade of Chicago. Mr. and Mrs. Wayman will make their home at Detroit, Mich.

The D. Rothschild Grain Company of Davenport, Iowa, went into voluntary bankruptcy the latter part of November. The company is well known in Iowa, having operated thirteen elevators at various country points and had in addition, malt houses at Chicago, Peoria and Sioux Falls, S. D. B. R. Lane has been named as trustee to settle the affairs of the company and it is expected the assets will be considerably larger than the liabilities. Failure to raise needed funds, the car shortage and other troubles were assigned as the cause of the failure.

Jerry Moore of South Carolina, who got 228¾ bushels and Capt. Z. J. Drake, also of South Carolina, who grew 255 bushels and three quarts of corn on single acres, were guests at the Chicago Land Show.

Capt. T. F. Peck, Commissioner of Agriculture of Tennessee, has appointed A. M. Stout of Greenfield to be feed and seed inspector for west Tennessee, to fill the position held by P. H. Barbee, who recently resigned.

COURT DECISIONS

[Prepared especially for the "American Elevator and Grain Trade" by J. L. Rosenberger, LL.B., of the Chicago Bar.]

Contract Made by Acceptance of Option.

A member of a firm of grain merchants or dealers called a grain company over the long distance telephone and inquired "if it was in the market for some grain." The company asked how much the inquirer wanted to sell. The answer was, "5,000 bushels." The dealer then inquired for the difference "between sacked and loose grain," to which reply was made, "one cent"—that it (the company) would give 49 cents per bushel for sacked and 48 for bulk oats, and would "leave the offer open until 6 o'clock" of that day. The dealer then went into the local market for oats to fill the order and purchased 2,000 bushels of unsacked and 3,000 of sacked oats, and about 11 a. m. of the same day again called up the grain company, which answered between 1 and 2 o'clock and was then told that he (the dealer) "would ship the oats and a car of loose and a car of sacked would go out tomorrow and the other follow immediately." The dealer was then asked, "Haven't you got our telegram countermanding that order?" And the dealer replied, "I have got no telegram at all." He was informed that "a telegram countermanding the order had been sent," and the grain was refused. The telegram referred to was in cipher, but translated read: "42c f. o. b. Rio Vista best new red No. 3 cats or better, new sacks, El Paso weights and inspection, this week's shipment, subject to your immediate reply by telegram." It was not actually delivered to the firm until about 9 o'clock of the next day after the conversations above detailed. The firm of dealers sold the oats in question to others for the best price obtainable and instituted suit to recover the loss.

Upon the conclusion of the evidence as above substantially stated, the court at the company's request peremptorily instructed the jury to find for the grain company, and verdict and judgment were rendered accordingly. But the Court of Civil Appeals of Texas holds (Cooper Bros. vs. Rosenbaum Grain Co., 144 Southwestern Reporter, 358) that there was error in giving the peremptory instruction. The evidence undoubtedly tended to show an offer on the part of the grain company that was accepted within the period of an option given and before any countermanding order had been brought to the notice of firm. If so, the offer and acceptance constituted an enforceable contract for the breach of which the company was liable in damages. The trial court presumably was induced to give the peremptory instruction by the proposition urgently presented in defense of the court's action, viz., that the contract was unenforceable for want of mutuality. It was true there was no consideration for the option, and until acceptance of the company's offer there was no contract. Until then the agreement to give the prices stated was wholly unilateral, or one-sided, and neither party was bound. But upon acceptance it became otherwise. *Prima facie* under the facts stated, the dealers were entitled to recover notwithstanding the transmission of the telegram alleged to constitute a revocation and regardless of the further contention as to whether prior to the company's acceptance either party to the litigation regarded themselves bound. An offer to buy or sell, it has been said, becomes a binding agreement when the person to whom the offer is made accepts it and communicates his acceptance or performs an act in compliance with the terms of the offer from which his acceptance may be implied. An offer, unless withdrawn, may be accepted within the time expressly or impliedly limited. An acceptance may be revoked by communication to that effect before the acceptance is communicated, but not after. A person who has made an offer must be considered as continuously making it until he has brought to the knowledge of the person to whom it was made that it is withdrawn. To revoke a proposal once made the revocation must be communicated before acceptance. An uncommunicated revocation is, for all practical purposes and in point of law, no revocation at all. A revocation sent by post does not operate from the time of posting it.

The Oklahoma City Mill and Elevator Co. of Oklahoma City, Okla., has filed suit against J. Cusi-mano, a macaroni manufacturer, for \$508 on a flour claim.

The Fidelity Chemical Corporation of Houston, Texas, has filed a suit in the District Court asking that a receiver be appointed for the Reinhardt Grain Co. of Barstow, Texas.

The Whitney Grain Line, a canal-boat company of Buffalo, N. Y., has filed a voluntary petition in bankruptcy with liabilities listed at \$3,501.85 and assets at \$7,100, including four canal boats valued at \$5,000.

The Rosenbaum Grain Co. of Chicago has been sued by the Belt Railway of Chicago for \$1,250, said to be due for demurrage on cars which the railroad claims were held in its yards on account of the crowded condition of the sidetrack of the grain company. The railroad contends that under a ruling of the Interstate Commerce Commission consignees

are liable for demurrage where, through their own fault, the cars are held up.

Frank H. Stimple, dealer in implements, grain and feed at Geneva, Ill., has filed a petition in bankruptcy. The liabilities are said to be about \$6,000 with assets of about one-third that amount.

R. E. Robey, who has been engaged in business at Oklahoma City, Okla., as the Robey Grain Co., has filed a voluntary petition in bankruptcy, placing his liabilities at \$33,900 and his assets at \$6,988.

The Farmers' Grain Co. of Akron, Iowa, is said to have begun a number of suits against the C., M. & St. P. R. R. for alleged damages caused by defective cars used in the transportation of grain.

W. B. Roby, formerly manager of the South Dakota Farmers' Elevator Co., at Aberdeen, S. D., which failed in 1911 with liabilities of approximately \$47,000, was recently acquitted of a charge of embezzlement of the defunct corporation's funds.

The Baker Grain Co. of Springfield, Mo., was defendant in a suit recently filed for the cancellation of its charter, on the ground that it had forfeited it by failing to list its property with the Secretary of State and to make the necessary reports.

O. C. Hiatt has filed suit against the Farmers' Grain and Elevator Co. at Armington, Ill., to secure payment for blue prints submitted by an associate of Hiatt, for a contemplated elevator. The firm is said to desire to delay payment as the house is not to be built until spring.

The D. Rothschild Grain Co., with headquarters at Davenport, Iowa, and elevators and malt houses at Chicago, St. Louis, Omaha, Peoria, Sioux Falls and several other cities, went into voluntary liquidation Nov. 23. The trustee, Richard Lane, hopes to arrange with the creditors to continue the business.

Eugene A. Kelly of the Kelly Bros. Grain Co. of Wichita, Kan., has filed a petition in voluntary bankruptcy. Claims are said to have been put forward by 56 creditors and the liabilities of the firm total less than \$8,000. Office furniture, wearing apparel and a \$750 debt to the firm are assets mentioned.

Henry Maus, a grain buyer at Latham, Ill., has been arrested on the charge of maintaining a public nuisance in the way of a corn sheller. The sheller stands in the open and the residents of the village complain of the chaff which is said to be particularly offensive during a high wind.

I. L. Ennis, J. W. Robertson and G. W. Ratburne have been placed under \$3,000 bail each, charged in the Federal Court with procuring five cars of broom corn from Oklahoma producers to be delivered to a fictitious company in Kansas City. The three men are also charged with using the mails fraudulently.

The Pacific Coast Elevator Co. has filed suit against Homer I. Watts of Athena, Ore., and T. D. Taylor of Pendleton, Ore., alleging that the plaintiff purchased 650 sacks of barley from the defendants which it is claimed that the latter have taken since unlawfully. Judgment is asked for the grain or value and \$65 damages.

Moses L. Holly of Rapid City, S. D., has filed suit against Donoho & Son, formerly of Rapid City, now of Omaha, Neb., for \$247, an alleged balance due on a bill of hay which amounted to \$380.50. There were two carloads in the shipment of hay, which the Donohos claim was musty and for which they remitted to Holly \$139, their estimated value of the hay.

Lee A. Hawks, a grain dealer of Cook, Neb., has been awarded \$313.71 payment for the making of doors for a freight car by the Missouri Pacific Railroad, notwithstanding the company's defense that a rule of the Interstate Commerce Commission prohibited railroads from reimbursing shippers for such expense. The Supreme Court affirmed the judgment of the District Court.

The Farmers' Elevator Co. of Mazon, Ill., has won its suit against the C., C. & St. L. Ry. Co. for an injunction restraining the railroad company from removing the switch laid by the grain company or discriminating against the company in the matter of cars. The suit was the outgrowth of a fight between the farmers and the railroad company, the latter having refused to lay a switch and later tearing up the switch which the farmers had laid. The case was carried through three courts.

The Attleboro Grain Co. of Attleboro, Mass., was recently fined \$50, charged with doing business without an incorporation certificate as provided by law. Patrick Nerney was the complainant. Several weeks ago he bought hay and grain at the mill and later arrested the company for alleged short weight. The company was fined \$75 on different charges. Mr. Nerney claimed that the company refused to sell him after this time, and on investigation he claims to have found that the company was doing business without the legal certificate.

The Kendrick-Roan Grain and Elevator Co., which recently brought suit against J. H. Weaver and the National Surety Co. at Nashville, Tenn., has appealed the case to the Supreme Court, following the decree of the Chancery Court in giving judgment in favor of the Fourth National Bank for \$40,000, relief sought in the original bill, and also \$10,000 penalty. The suit was the outgrowth of a loan on the part of the bank of \$40,000 for which, according to the complainants, warehouse receipts were given, the same being declared under bond as genuine. Claiming that these receipts proved not to be genu-

ine the suit was filed, naming not only Mr. Weaver, but the bonding company that made the guarantee.

A. M. Eastburn & Co. of Eastburn (R. F. D. from Sheldon), Ill., have filed suit against James Eastburn, a nephew of the senior member of the firm, alleging that the defendant called the grain firm by 'phone and made a contract for 2,900 bushels of corn. The plaintiffs claim to have immediately sold the corn to the Cleveland Grain Co., delivery to be made within thirty days; but it is alleged that the defendant failed to deliver the grain.

THE HALL-BAKER CASE DECISION

CONSTRUCTION OF THE PURE FOOD LAW IN ITS RELATION TO OFFICIAL INSPECTION DEPARTMENTS.

The Hall-Baker case, now something over a year in the United States Circuit Court of Appeals, is so well understood by the trade that no lengthy statement of the case is here needed. The Hall-Baker Grain Co. shipped from Kansas City certain wheat inspected out as "No. 2 Red" by the official state inspector of Missouri. At its destination, Fort Worth, it was seized by the United States pure food inspector as "adulterated and misbranded." On trial of the libel in the U. S. District Court, the verdict was for the Government. In the U. S. Circuit Court of Appeals, however, this judgment was reversed, the decision of the court, Sanborn, J., being as follows:

SYLLABUS.

1. Pure Food Act—Construction—Purpose.

The purpose of the Pure Food Act of June 30, 1906 (34 Stat. 768) was (1) to protect purchasers from injurious deceits by the sale of inferior for superior articles; and (2) to protect the health of the people from the sale of normally wholesome articles to which have been added substances poisonous or detrimental to health.

2. Same—Misbranding—Adulteration—Sale of One Article for Another—Facts—Conclusion.

The Hall-Baker Co. at Kansas City, Mo., on April 3, 1909, contracted to sell to the Walker Grain Co. at Fort Worth, Texas, five thousand bushels of No. 2 Red wheat, according to the Missouri official state grades. On April 29, 1909, the Hall-Baker Co. ordered the operator of a public elevator where it stored its grain to ship to the Walker Grain Co. in fulfillment of this contract, No. 2 Red wheat. The operator loaded and sent to the Walker Grain Co. a car of wheat. After this wheat was loaded the official inspector of the state of Missouri at Kansas City inspected, adjudged and certified this wheat to be No. 2 Red wheat. An invoice of it was forwarded to the Walker Grain Co. dated May 3, 1909, showing that it was shipped under the contract of April 3, 1909, and subject to Kansas City weights and grades. The wheat arrived in Texas without change. The Texas inspector, the Federal inspector and other witnesses there found it to be, and it was, wheat of another and less valuable grade. None of the officers or employees of the Hall-Baker Co. had any knowledge of this fact, or anything to do with the grading or shipping, except to order the operator of the public elevator to ship No. 2 Red wheat.

Held: The Hall-Baker Co. was not guilty of misbranding or of adulterating within the meaning of Sections 8 and 7 of the Pure Food Act.

DECISION.

The defendant below, the Hall-Baker Grain Co., a corporation, engaged in the purchase and sale of grain at Kansas City, Mo., was convicted of misbranding a carload of mixed wheat, No. 2 Red wheat, and of adulterating the same by mixing other inferior wheat with it in violation of the Pure Food Act of June 30, 1906, 34 Stat. 768, Sections 7 and 8, U. S. Comp. Stat. Supp. 1909, pages 1191, 1192. It attacks the judgment against it on many grounds, one of which is that there was no substantial evidence of the charges against it, and the court below refused to instruct the jury, as it requested, to return a verdict in its favor.

The defendant was found guilty of misbranding under the second and adulteration under the fourth count of the indictment. The second count was based on these provisions of Sec. 8 of the Act: "That for the purposes of this Act an article shall also be deemed to be misbranded, * * * in the case of foods, first, if it be an imitation of, or offered for sale under, a distinctive name of another article; second, if it be labeled or branded so as to deceive or mislead the purchaser." And the second count charged that the mixed wheat was offered for sale by the defendant as No. 2 Red wheat and that it was labeled No. 2 Red wheat, when it was in fact mixed wheat, so as to deceive and mislead the purchasers thereof.

The fourth count was founded on this declaration of Sec. 7 of the Act, "That for the purposes of this Act an article shall be deemed to be adulterated in the case of food, first, if any substance has been mixed and packed with it so as to reduce, or lower, or injuriously affect its quality or strength; second, if any substance has been substituted in whole or in part for the article; third, if any valuable constituent of the article has been wholly or in part abstracted; fourth, if it be mixed, colored, powdered, coated or stained in a manner whereby damage or inferiority is concealed"; and the fourth count charged that each of these things had been done to the carload of wheat.

There was evidence tending to establish these facts: Kansas City, Mo., was a grain market. There was a public elevator capable of containing one million bushels of wheat, operated by a corporation which had no interest in this transaction, which classified wheat purchased by the defendant

and other dealers according to its quality and grades as it came to it and was inspected by the official Missouri inspectors and stored it in its various bins, so that wheat of the same grades or qualities went into the same bins and those of different grades and qualities into different bins. On receipt of orders from the owners of this wheat to ship out wheat of any grade, the elevator company loaded it out of the bin containing that grade of wheat into a car; that carload of wheat was then inspected by an official inspector of the state of Missouri and certified to be of the grade and character which he found and adjudged it to be. There were rules for this inspection that had been established pursuant to laws of the state of Missouri and the inspection was made by officers of the state. One of these rules was that No. 2 Red wheat was "to be sound, well cleaned, dry, red winter wheat, weighing not less than 59 pounds to the measured bushel."

On April 3, 1909, the defendant agreed to sell five thousand bushels of No. 2 Red wheat according to Missouri state inspection and Kansas City weights, to the Walker Grain Co. at Fort Worth, Texas. On April 29, 1909, the elevator company, pursuant to an order from the defendant, loaded into a car forty-five thousand pounds of wheat which an official inspector of the state of Missouri inspected, adjudged and certified to be No. 2 Red wheat, and caused this carload of wheat to be forwarded to the Walker Grain Co. in Texas. No officer or employee of the defendant ever saw this load of wheat, or had anything to do with its shipment, except to order the elevator company to ship a carload of No. 2 Red wheat. There was an invoice of this wheat dated May 3, 1909, which stated that the Walker Grain Co. bought of the defendant on April 3, 1909, this and another carload of "2 Red Wheat. * * * K. C. Wts. and Grades."

No. 2 Red wheat is a soft wheat containing not over 5 per cent of hard wheat; and soft wheat which contains from 20 per cent to 45 per cent of hard wheat is No. 2 or No. 3 mixed wheat, or some other grade of wheat; and the mixture of such a percentage of hard wheat with No. 2 Red wheat depreciates its value in the Southwestern markets. This wheat was delivered to the consignee in Texas in the same condition that it was when inspected in Kansas City.

When this load of wheat arrived in Texas it was inspected by a Texas inspector, a Federal inspector and others, who found it to contain from 20 per cent to 45 per cent of hard wheat. They differed in their estimates of the percentage of hard wheat in it and in the grade of mixed wheat to which it belonged, but agreed that it was not No. 2 Red wheat.

It is impracticable to keep the crops of wheat of different farms separate in the transportation of and traffic in this article from the purchaser to the consumer, and it is generally bought and sold by official or established grades, according to the inspection of specified officers or persons. Such officers or persons sometimes differ in their judgment of the grades to which specific lots belong. Wheat generally contains some hard wheat and some soft wheat. Some wheat is very hard and some very soft. There are many degrees of hardness and of softness of wheat which pass imperceptibly into each other and there is no fixed and clear line of demarcation whereby all wheat may be indubitably separated into hard wheat and soft wheat. No other facts were disclosed at the trial which are material to the question before us.

The act for the violation of which the defendant was convicted is entitled, "An Act for preventing the manufacture, sale or transportation of adulterated, or misbranded, or poisonous, or deleterious foods, drugs, medicine and liquors." This title and the Act itself, when carefully read and considered, demonstrate the fact that the sole purpose of its enactment was (1) to protect purchasers from injurious deceptions by the sale of inferior for superior articles and (2) to protect the health of the people by preventing the sale of normally wholesome articles to which have been added substances poisonous or detrimental to health. The clauses of the Act under which the defendant was convicted were evidently enacted to prevent the injurious deceit of purchasers. But where, in the facts that were proved and that have been recited, is there any evidence of any intent to accomplish deceit, or of any violation of the provisions of this law?

The first charge was that the carload of wheat was offered for sale under a distinctive name of another article of food, to-wit, No. 2 Red wheat, when it was in fact mixed wheat. The proof was that the defendant offered to sell and sold five thousand bushels, not of No. 2 Red wheat, but of such wheat as under the laws of Missouri the official inspector of that state at Kansas City should decide and certify to be No. 2 Red wheat, that it delivered the load of wheat in question pursuant to that contract and that this load of wheat was such wheat as under the laws of Missouri the official inspector of that state at Kansas City did adjudge and certify to be No. 2 Red wheat. Concede that the inspector was mistaken and that the wheat was in fact mixed wheat, nevertheless it was the wheat which the Missouri inspector adjudged and certified to be No. 2 Red wheat, and the wheat that he should so adjudge and certify and no other, whatever its actual grade, was the article the defendant offered to sell and sold. It was the undoubted right of the parties to this sale to make the Missouri official inspector the arbiter between them of the character and grade of the wheat in which they dealt and to make his decision and inspection an ineradicable term of its description. That they did when they agreed that the wheat sold should be No. 2 Red wheat according to the Missouri inspection; and as the defendant offered and sold no other, there was no evidence in this case that he offered one article under the distinctive name of another.

The second charge was that the wheat was la-

beled and marked No. 2 Red wheat when it was in fact mixed wheat, so as to deceive and mislead the purchasers thereof. But there was no evidence that it was ever labeled or marked at all. The Government offered the invoice of the wheat in evidence, over the objection of the defendant, to prove a label; but this invoice contained a provision similar to that in the contract of sale, to the effect that the wheat was to be governed by the Missouri grades, and the wheat had been already inspected and graded No. 2 Red wheat by the official inspector several days before the invoice was issued. There was no evidence of any false labeling to deceive purchasers here.

The fourth count of the indictment charged (a) that other grades of wheat had been mixed with the wheat shipped so as to injuriously affect it; (b) that other grades of wheat had been substituted in part for the No. 2 Red wheat pretended to be sold; (c) that a part of the No. 2 Red wheat had been abstracted and a like quantity of wheat of inferior grade substituted; and (d) that the wheat was mixed and packed with other grades of wheat whereby damage and inferiority were concealed. But, as has already appeared, the proof was conclusive that the wheat sold and delivered was the identical article offered for sale, to-wit, that wheat which under the laws of Missouri the official inspector of that state should and did adjudge and certify to be No. 2 Red wheat.

There was no evidence that any other grade of wheat was ever mixed with that wheat or substituted in part for it, or mixed or packed with it, or that any part of it had been abstracted. The proof was that on the order of the defendant the operator of the public elevator loaded it into the car; the official inspector tested it, adjudged and certified it to be No. 2 Red wheat; it was hauled without mixing, abstraction, or substitution, to the consignee in Texas, where other inspectors found it to be mixed wheat; and there the evidence on this subject ceases. There was no evidence to sustain the conviction of this defendant on either count of this indictment.

The Act of Congress was not enacted to catch and punish merchants who are conducting their business by customary and approved methods, with no intent to deceive purchasers, or to injure the public health, for the mistakes of third persons over whom they have no control, nor for trivial errors of their own, which at first blush may seem to bring their action within the inhibition of the law but by which in reality they violate neither its letter nor its spirit.

Many other questions of law arose at the trial and were discussed by counsel at the bar. But the conclusion which has been reached renders it unnecessary to consider them; and because there was no evidence to sustain any of the charges in this indictment the judgment below must be reversed and the case remanded to the court below for a new trial; and it is so ordered.

ARBITRATION DECISIONS.

The following arbitration decisions were kindly furnished by Secretary Gibbs of the Texas Association:

PLAINTIFF SHOULD HAVE BEEN PROTECTED.

Taylor Grain Co. vs. Early Grain and Elevator Co.—[E. N. Noble and Kent Barber, committee.]—The testimony shows that on Feb. 1, 1912, plaintiff purchased from defendant four cars maize heads at \$19.50 per ton, basis delivered Texas common points, ten to fifteen days' shipment, subject to arrival drafts. No shipments were ever made to apply.

Various messages were exchanged, and contentions were made by defendant relative to changing contract to read "demand drafts" and relative to the manner of figuring freights. Since the shipments were made, we cannot consider what the freight might have been had the shipments moved. As to the question of demand drafts as required by the defendant, that feature should have been discussed when the shipping instructions were first given. The evidence shows that on March 10 plaintiff offered to buy in the four cars at \$22.90, and later bought at \$23.40. We are of the opinion that plaintiff should have protected at the lower price, and we will therefore find in favor of the plaintiff for \$3.40 per ton on 48 tons.

It is therefore ordered that Early Grain and Elevator Co. promptly pay to Taylor Grain and Hay Co. at Corpus Christi, Texas, the sum of \$163.20.

Note.—The above was appealed to the executive committee, and on Aug. 20, 1912, the finding of the arbitration committee was affirmed in all things.

REFUSAL OF WHEAT.

D. W. Finney, plaintiff, vs. Texas Grain and Elevator Co., defendant.—[A. B. Crouch, E. N. Noble and A. P. Hughston, committee.]—Claim for \$57.78, account of the refusal of defendant to receive one car load of wheat.

The testimony shows that defendant wrote plaintiff on Oct. 24, 1911, a letter containing the following clause: "We are in the market for a car or two of nice No. 2 soft red wheat, for which we offer you 98 cents per bushel f. o. b. there. If you can furnish us any at this price, please wire us immediately upon receipt of this letter." The plaintiff telegraphed in reply to this letter on Oct. 26 as follows: "We accept your bid of 98c net our track, one car load No. 2 red winter wheat, M., K. & T." On same date defendant wired in answer to above message as follows: "Market has declined 97 there, the best that could be done, one car load choice No. 2 red

winter wheat. Answer by telegraph immediately." The plaintiff wired on Oct. 27, in reply to above as follows: "We accept your bid of 97 net our track, one car load No. 2 red winter wheat."

The defendant confirmed the purchase by mail Oct. 29, for shipment at once, and ordered the wheat shipped to Denison, Texas. On Nov. 2, 1911, the defendant wrote plaintiff, advising that the wheat had been bought for immediate shipment, which would make the contract time expire including Oct. 31, and that the trade should be cancelled if the wheat had not been so shipped. The plaintiff shipped the car of wheat Nov. 2, 1911, in car M., K. & T. No. 3322, invoicing same to contain 858 bushels, making draft on defendant, with bill of lading attached for \$880. This draft defendant allowed to go to protest, claiming that the wheat had not been shipped within contract time. The parties being unable to agree, plaintiff made other disposition of the wheat and rendered bill for the loss, which defendant declined to pay. The adjustment of the difference was then submitted to this committee.

The only point for our decision is whether or not the contract of purchase and sale was for immediate shipment as contended by defendant. All the letters and telegrams sent by the defendant to plaintiff and which led to the deal, did not specify any time of shipment. It is well understood among grain dealers that where no time of shipment is stated prompt shipment shall be implied. The defendant relies on his confirmation, which read, "Shipment at once"; but we are of opinion that if defendant wanted immediate shipment it was his duty to so specify in his telegraphic offer. We will therefore hold that the plaintiff complied with the contract when he shipped the car on Nov. 2, 1911, and that it was the duty of the defendant to have accepted the wheat so shipped. The defendant has offered no testimony to show that plaintiff did not realize the value of the wheat on its resale, and we will find for plaintiff in the amount of his claim as follows:

853 bu. wheat, loss 6c per bu.....	\$51.48
Expense protest of draft.....	4.50
Three telegrams.....	1.80
	<hr/> \$57.78

CLAIM FOR SHORTAGES, ETC.

The Howe Grain and Mercantile Co. vs. the Wichita Mill and Elevator Co.—[Same committee.]—Claim for \$229.20 for shortages and other charges on Sunday shipments of oats.

On July 14, 1911, defendant sold plaintiff 5,000 bushels No. 3 or better Texas red oats in uneven weight sacks at 58½¢, freight paid to Vicksburg, Miss., Vicksburg weights and grades. July 21, 1911, defendant made a further sale of 500 sacks No. 2 Texas red oats to plaintiff at 59½¢, freight paid to Vicksburg, also on Vicksburg weights and grades. Later the plaintiff requested this latter purchase to be shipped in two cars of 1,500 and 1,000 bushels respectively; and when defendant ascertained that a 40,000 minimum applied to Vicksburg he was permitted by plaintiff to include in the shipment 250 bushels No. 3 Texas red oats at 52 cents, freight paid to Vicksburg.

The defendant shipped the oats; and on arrival at Vicksburg one of the cars was first graded No. 3, the same having been shipped for No. 2. It stood quite a while pending adjustment, and finally was graded on reinspection No. 2. Considerable demurrage accrued on this car; the plaintiff contends that defendant should stand this charge, as well as other charges due to its first having been inspected No. 3. But as it was finally found to grade No. 2 on reinspection, these charges should not be borne by defendant.

There was several dollars demurrage charged on all the cars; and it appears that defendant was delayed in getting drafts with bills of lading to plaintiff more or less on all the cars; and we find that five days, including the two days' free time, was a reasonable time in which the drafts of plaintiff should reach Vicksburg after leaving Howe, Texas; and we will, therefore, revise the demurrage charges in plaintiff's bill to this basis.

The plaintiff has also made a charge of \$1 per car for inspection and weighing at Vicksburg. As there was no official inspection and weighing at Vicksburg, we think such charge improper; and we will accordingly order same eliminated.

One of the cars of No. 2 oats was shipped to Vicksburg and by plaintiff was forwarded to some point in Alabama, the same grading No. 2 clipped in Vicksburg, and when it reached the Alabama destination it was there rejected on account of being clipped. But it appears that it had already been forwarded from Vicksburg by the agent of plaintiff before complaint was made to defendant on this ground. The oats having been specifically sold on Vicksburg grade, we will hold that plaintiff was in error when forwarding the car from Vicksburg without first obtaining the consent of defendant; and we will eliminate the charges rendered by plaintiff for the misgrade of this car on account of being clipped.

We will render in favor of the plaintiff for the sum of \$92.39 [the said sum being the allowance for shortage, demurrage, etc.].

COMMUNICATED

[We invite correspondence from everyone in any way interested in the grain trade on all topics connected therewith. We wish to see a general exchange of opinion on all subjects which pertain to the interest of the trade at large, or any branch of it.]

BUILDING IN KANSAS.

Editor American Elevator and Grain Trade:—Mr. S. A. Hutchinson is building an elevator at this place. Growing wheat looks fine. Corn is making 25 to 50 bus. per acre. The farmers will not sell much for 35c, but 40c would move lots of it fast.

Yours truly,
Strawn, Kans. KUHLMAN BROS.

SPREAD THE GOOD NEWS.

Editor American Elevator and Grain Trade:—I hope within the near future I may be able to induce each of the 350 millers and elevator operators of the territory of our [Tri-State Grain Producers' and Dealers'] Association to become subscribers to and readers of your excellent paper.

Yours truly,
Lima, O. THOS. P. RIDDLE.

SOME INDIANA NEWS.

Editor American Elevator and Grain Trade:—We shipped our first car of new corn on November 26. Corn here has been slow in getting into shape to handle, but freezing weather is drying it out rapidly.

Geo. T. Bowen, senior member of the firm of Geo. T. Bowen & Son, of Kennard, is interested as a partner with E. E. Macey at Crete, Ind., in the grain business.

Geo. T. Bowen & Son handle coal, feed, flour and fencing as sidelines in connection with their grain business.

Yours truly,
Kennard, Ind. HARRY F. BOWEN,
Manager.

BALTIMORE AND W. MD. RY.

Editor American Elevator and Grain Trade:—Please be advised that the Western Maryland Railway is not in position to secure delivery at Baltimore of export grain at the export elevators of the Baltimore & Ohio and Pennsylvania Railroads except that originating at points on the Western Maryland Railway.

While this condition is, we believe, quite generally understood by the Western connections of the Western Maryland, we would be glad to have you make mention of the fact lest inadvertently some export shipments of grain might be tendered and reach Baltimore via Western Maryland and create complications.

Yours very truly,
Baltimore, Nov. 20. H. SHERIDAN,
Traffic Manager.

CANADIAN GRAIN MARKETS.

Editor American Elevator and Grain Trade:—John Gillispie, president of the Gillispie Elevator Co. and member of the Winnipeg Grain Exchange, said in an interview in the capital city of Alberta that competition is so necessary that Edmonton must have an exchange before many years have passed, adding:

"The longer we are prevented from shipping to Duluth and Minneapolis the sooner is Edmonton likely to get an exchange. On the first car of barley I shipped last season I would have given the farmer at least \$360 more if I could have shipped it to the markets over the line.

"An effort has been made to establish a grain market at Port Arthur, but beyond some of the firms writing and asking you to ship to them nothing more is heard of it. Of course, the grain has to go through Winnipeg to get to Port Arthur and all grain is inspected at Winnipeg.

"Winnipeg cannot hope to continue to handle all the grain of the West when it has reached a volume several times as great as it is now. There must be other outlets, and outlets will be provided on the Pacific Coast. The railways that are building through Edmonton to the Coast are getting the lowest possible grades because they look to the handling of the enormous wheat exports from Saskatchewan and Alberta.

"All the railways are making Edmonton an objective point. They either start here or make this their main divisional point in the West. They are radiating from this city on all sides. In two years the Peace River country will be shipping grain into Edmonton and by that time there will be two railways operating between Edmonton and the Pacific Coast.

"From the north, and the east, and I believe also from southern Alberta, the grain will be shipped through Edmonton. Calgary has been talked of as a point for a grain exchange, but Calgary has only one through line to the Coast and a grade that makes heavy freight too expensive to handle. The Canadian Northern and the Grand Trunk Pacific Railway companies are building their lines through southern Alberta, and linking up all parts of the province with Edmonton. Their main lines to the Coast run through Edmonton, so that all the traffic

will be brought this way. It is probable that the Canadian Pacific Railway Co. will also build through to the Coast by way of Edmonton.

"It may seem rather early at the present time to talk of Edmonton rivaling Winnipeg as a grain mart, but I believe that the opening of the lines to the Coast and the opening of the Panama Canal will bring the time near when the wheat grown in Alberta and Saskatchewan will be inspected and sold in Edmonton."

Yours truly,
Edmonton, Alta.

AUGUST WOLF.

THE CROP REPORT.

The December Crop Report, as translated into acres and bushels by the *Inter-Ocean*, means an indicated acreage of 32,387,000, a loss of 828,000 acres, or 25% of 1912 and a yield of 572,430,000 bus. for 1913, or 182,000,000 bus. more than was harvested in 1912.

Detailed reports of acreage and condition and a comparison of the indicated crop and that harvested this year follow:

State—	Acreage Sown,		Crop, bu.—	
	1912 preliminary.	Indicated for 1913.	Harvested 1912.	
New York	342,000	7,695,000	5,360,000	
New Jersey	83,000	1,543,000	1,462,000	
Pennsylvania ...	1,326,000	23,868,000	22,320,000	
Delaware	116,000	1,855,000	1,942,000	
Maryland	618,000	10,876,000	8,970,000	
Virginia	754,000	9,048,000	8,596,000	
West Virginia ..	239,000	2,390,000	3,262,000	
North Carolina..	618,000	6,180,000	5,322,000	
South Carolina..	82,000	918,000	727,000	
Georgia	146,000	1,635,000	1,256,000	
Ohio	1,972,000	37,468,000	9,536,000	
Indiana	2,214,000	38,966,000	9,648,000	
Illinois	2,290,000	40,762,000	9,819,000	
Michigan	870,000	14,877,000	7,332,000	
Wisconsin	91,000	1,693,000	1,696,000	
Iowa	346,000	6,343,000	6,417,000	
Missouri	2,350,000	37,600,000	23,932,000	
Nebraska	3,188,000	63,084,000	51,408,000	
Kansas	7,080,000	123,192,000	85,776,000	
Kentucky	756,000	9,072,000	6,860,000	
Tennessee	707,000	8,767,000	7,004,000	
Alabama	33,000	363,000	318,000	
Mississippi	9,000	108,000	96,000	
Texas	758,000	9,399,000	10,560,000	
Oklahoma	1,761,000	27,056,000	20,243,000	
Arkansas	103,000	824,000	940,000	
Montana	557,000	15,874,000	7,420,000	
Wyoming	34,000	904,000	784,000	
Colorado	222,000	6,149,000	4,728,000	
New Mexico	46,000	1,334,000	740,000	
Arizona	28,000	616,000	651,000	
Utah	186,000	4,464,000	3,822,000	
Nevada	16,000	400,000	448,000	
Idaho	348,000	10,022,000	9,656,000	
Washington	1,138,000	27,588,000	27,269,000	
Oregon	570,000	13,110,000	16,884,000	
California	390,000	6,357,000	6,738,000	
Totals	32,387,000	572,430,000	389,942,000	

The Report indicates a rye crop of 41,000,000 bus., compared with 35,422,000 bus. harvested this year. Condition Dec. 1 was 93.5, against 93.3 last year. The acreage is 2,443,000, or 1.4% less than the revised area sown last year. Details by states follow (000 omitted):

State—	—Acreage—		—Condition—	
	1911.	1912.	Dec. 1, 1912.	Dec. 1, 1911.
Wisconsin	391	379	95	95
Michigan	400	384	91	89
Minnesota	322	352	92	96
Pennsylvania	301	298	97	93
New York	143	140	96	97
New Jersey	78	78	97	94
Indiana	78	80	94	92
North Dakota	73	71	86	93
Nebraska	68	67	95	95
Ohio	64	70	93	88
All other	560	551	93	93

United States, total. 2,478 2,443 93.5 93.3

Findlay, O., sends in reports of bad ear rot of corn, affecting about one-tenth of the yield of some townships.

The Farmers' Elevator Co. and the Beatrice (Neb.) Commercial Club are hunting an agricultural expert for Gage County.

J. W. Beckman, Cokato, Minn., won the N. P. silver cup for best bushel of corn shown at the Northwest Products Exposition in November. The variety was Silver King.

G. B. Harrison, superintendent of the elevators at Westwego, La., has been promoted to the superintendency of the terminals of the Texas & Pacific Railroad at New Orleans, including the Westwego house.

TRANSPORTATION

The SS. C. W. Kotcher lies up with wheat at Detroit with wheat at 3½c.

Charters to winter at Ft. William with wheat for Buffalo have been made at 3½ to 3¾c.

St. Joseph, Mo., shippers interested in transit privileges may appoint a transit agent to look after the reports of all shippers.

Detroit hay men have filed a protest before the Mich. State R. R. Board against a proposed demurrage charge of \$5 per day after 48 hours.

Congressman Prouty of Iowa has introduced a bill in Congress that would require consignees to unload all freight cars within five days of their arrival in order to prevent car shortage.

The Lake Shippers' Clearance Association, in spite of a bad storm of three days previous, on Dec. 1 cleared twenty boats with a total tonnage of over 4,000,000 bushels of grain from Ft. William, thereby breaking all previous records for a day's shipping at the Canadian head of the lakes.

In order to break the blockade at head of the lakes the Canadian government on Nov. 28 suspended the navigation laws to allow all American vessels at Port Arthur and Fort William at the end of the season of navigation to take on grain cargoes there for delivery to Canadian ports at the opening of navigation next spring.

Effective January 1, 1913, the Chicago, Milwaukee & St. Paul Ry. has changed its minimum weight basis on oats from stations in Iowa, Missouri, Minnesota, South and North Dakota, the effect of which is to make a minimum weight basis uniform on all grain from all stations on that road, both west and east of the Mississippi River.

At December 4, close of navigation, there were 33 grain boats inside of the Buffalo breakwater and 20 more at elevators unloading. The 33 were estimated to contain close to 13,000,000 bus. of wheat, which has been since increased to more than 18,000,000 bus., with cars out for barely 300,000 bus. per day. There is, therefore, more grain at Buffalo at this time than at any time in ten years.

The Erie Canal closed for the season on Nov. 15. No through boats, drawn by horses, were cleared from either Buffalo or Albany after Nov. 6, while those drawn by tugs were all cleared by the 8th. The season of navigation was shortened by at least six weeks this year owing to the bad break at the Irondequoit creek, near Rochester, in September. This had a serious effect upon the volume of tonnage carried by water between New York and Buffalo. The final rate for grain to tidewater was 6¼c per bu.

The Chicago Board of Trade transportation department gives notice that, effective November 25, the Belt Railway has published a rate of ½ cent per 100 pounds (minimum weight 60,000 pounds) on shipments originating at and destined to points within the Chicago switching district handled by the Belt Railway between connecting lines. The former charge of the Belt Railway on such traffic was \$2.50 per loaded car and \$1.25 per empty car, which charge still obtains on shipments originating beyond Chicago handled by the Belt Railway as an intermediate line.

Rates Suspended—Until May 30: Advances in minimum weight of corn shipped in carload lots between St. Louis, Kansas City and other points in Arkansas, Louisiana, Texas and other points, filed by the Frisco and Rock Island systems; Rock Island tariff cancelling the existing export rate of 16½ cents per 100 pounds on oilcake, oilmeal, screenings and flaxseed, in carloads, from St. Paul and Minneapolis, Minn., to certain Gulf points, including Galveston, Texas, leaving in effect only the class rate of 35 cents; and also tariffs of the I. C., K. C. S., T. & F. S. M. Pac. and the St. L. I. M. & S. railroads, which advance from 15½ cents to 19½ cents per 100 pounds rates on grain from Missouri River points to Gulf ports when for export to European countries.

COMMISSION MERCHANTS' LIABILITY.

The Chicago Board of Trade transportation department calls attention to the following decision of the Commerce Commission as to the liability of a commission merchant for uncollected freight charges after settlement with his principal has been made:

"We have held that where a commission merchant who pays the freight in the first instance has settled with his principal, who, by the terms of that settlement, has paid the freight charges, such commission merchant has no further interest in the transaction, and is not a proper party to maintain a proceeding for the recovery of reparation. But it must appear that the account has been closed; that the freight has been in fact paid by the principal; and that the interest of the commission merchant has been extinguished." (Crutchfield & Woolfolk vs. Southern Pacific Company. I. C. C. Rep., 679.)

"It is the duty of a railroad company to exhaust its

legal remedies to collect all proper freight charges, but the above decision holds that the commission merchant, having paid the freight charges and settled with his principal, is not obligated for the payment of any uncollected transportation charges. Such further collection, if any, must be made by the carrier from the owner direct."

ELEVATION ALLOWANCE.

In the case of P. C. Kamm & Co. against the Pennsylvania and other railroads the Commerce Commission in December ruled that the C. M. & St. P. R. R., operating a grain elevator in Milwaukee, has been receiving a double allowance on the trans-shipment of grain. It was noted in this case that the company charged the complainants $\frac{1}{4}$ c per bushel upon their grain for elevation at Milwaukee if ordered out in ten days and that the lines east from Milwaukee pay a charge to the owners of the elevator in the same sum for the transfer service.

The road was ordered to modify its tariffs so as to provide that when the company collects this transfer charge from the Eastern lines no transfer charge shall be made against the grain dealer.

DAMAGES AWARDED FOR DELAY.

The G. N. Ry., during 1910, were asked to furnish 200 cars to handle potatoes for W. H. Ferrell & Co., at warehouses between Duluth and St. Paul. On January 13 Ferrell & Co. placed an order for 10c. They got 61. On January 28 they placed another order and got none. Mr. Ferrell then called on the traffic manager and was assured that he would get enough to supply his need. This, he held, was in the nature of a contract; and when the road thereafter failed to provide the cars, he brought suit for breach of contract. The price of potatoes had dropped when he finally got them to market. The lower court gave him judgment against the railroad company and the Supreme Court of Minnesota upholds it. The syllabus follows:

1. A contract by a common carrier to supply to a particular interstate shipper a specified number of cars on certain dates, to be used in such shipment, is not a violation of the act of Congress regulating interstate commerce, unless it appear that the contract if performed will in fact extend to that shipper an undue or unreasonable preference over other shippers.

2. Evidence held sufficient to support the verdict, and though perhaps indefinite in some respects, defendant is not under the rule of *Cruikshank vs. Insurance Company*, 75 Minn., 266, entitled to judgment notwithstanding the verdict.

Judgment affirmed.

ORDERS A REPORT ON CARS.

Effective December 1 the Commerce Commission will require railroads to make a semi-monthly report of the location of cars, giving, in detail, the cars of other lines on its own tracks and the number of its own cars on the lines of other carriers. The statement is expected to keep track of car congestion as it may occur from time to time. The order of the Commission is as follows:

"It appearing that certain carriers by rail are in possession of freight cars belonging to other carriers by rail, and are diverting such cars from the service of the owners thereof to the injury of the general shipping public,

"It is ordered, That each common carrier by railroad, subject to the act to regulate commerce shall forward to this commission as soon as practicable after the first day and the fifteenth day of each month, but in no case later than the tenth and the twenty-fifth day of such month, a statement prepared on the American Railway Association form CE-5—freight car location statement—showing the location of freight car equipment as provided therein: Provided, however, that such rail carriers as operate only a mileage of 250 miles or less may report summaries only.

"It is further ordered, That the first report under this order shall be made as of December 1, 1912, and shall be forwarded to this commission not later than December 10, 1912."

W. R. Rock has succeeded J. H. Lenter as agent for the Trans-Mississippi Grain Co. at Castana, Iowa.

The Industrial Traffic League at the meeting at Chicago on Nov. 16 elected the following officers for 1912-13: J. M. Belleville of Pittsburgh, president; vice-president, H. G. Wilson, Kansas City, Mo.; secretary and treasurer, O. F. Gell, Chicago.

A petition to President-elect Wilson urging the appointment of Professor Willis L. Moore of the United States Weather Bureau for a Cabinet position as Secretary of Agriculture was signed by 500 grain men in Chicago and forwarded. It is reported that petitions are also being circulated among members of scientific and commercial organizations in Chicago.

BARLEY and MALT

About 100,000 hushels of feed barley have been sold from Baltimore, Md., for export.

Secretary H. A. Plumb of the Milwaukee Chamber of Commerce claims that city is the leading barley and malting center of the United States. The amount of barley received in Milwaukee annually is between 17,000,000 and 18,000,000 hushels, maltsters and brewers being the greatest consumers.

Wisconsin grown barley was awarded first place at the New York Land Show, taking the \$1,000 prize cup presented by Col. Pabst of Milwaukee. The barley which was given first prize was raised on the farm of A. G. Kruger of Beaver Dam, Wis., and is the same that took the International prize for barley at Chicago.

It is reported that Minneapolis established a record for barley exportation during the first ten days of this month when almost 2,000,000 bushels of the grain were sold for exportation and handled through that market. It is said that other elements beside the Balkan War entered into the unusually heavy foreign demand, the demand for feed on the Continent being a strong feature.

Figures compiled by the Minneapolis Chamber of Commerce and the department of the State Weighmaster show for the year ending August 31, 1912, that there were received into Minneapolis storehouses 20,333,378 hushels of barley, of which 3,803,022 hushels were used in Minneapolis. It has been stated that the consumption in that city is fully ten per cent greater because in many cases the "out" weighing is duplicated by the fact that there is double storage and hence double weighing. It is believed that the maltsters and brewers of Minneapolis used about 4,000,000 hushels of barley during the 1912 fiscal year.

THE PRIZE BARLEY.

W. H. Prinz, in his monthly record of the barley and malt market for the *American Brewers' Record*, among other things says:

"At the American Land and Irrigation Show in New York," (where Mr. Prinz was a judge of the barley) "the first prize was awarded, not to a six-rowed barley, but to a two-rowed barley of the Svanhals type raised by Henry J. Krueger of Beaver Dam, Wis., who last year in Chicago got first prize for six-rowed. The yield of this barley is just as high, if not higher, than six-rowed.

"This shows that the old theory that we cannot profitably raise this class of barley in the Northwest is exploded. This Svanhals is certainly a fine barley, and great credit should be given Mr. F. Bock, superintendent of the Pabst Brewing Company, for selecting and experimenting with it and still working to improve it, and it looks to me now that the success is assured.

"The second prize went to California for a Chevelier which was exhibited by E. Clemens Horst & Co. Where this barley was grown in California and who the grower was they did not state.

"The third prize went to William Van Berge, Grangerville, Idaho.

"The other samples were chiefly of the Manchuria and Bay Brewing type and did not get any prizes."

As to the first prize barley Mr. Prinz says in substance that Mr. Bock says he has discarded all of the *nutans*, or drooping type of barley, and will in the future develop the *erectum* type, the upright barley. The reason is that the *nutans*, or drooping barley, will lodge more easily than the *erectum*, or upright type. I have, however, been a friend of the *nutans* type, because in bad weather the beards would shed the water, whereas in the *erectum* type it would follow the beards and lodge at the germ end of the barley; and that is why in the *erectum* type we have had so much barley in which the germ is damaged, and if the germ is damaged the barley is wholly unfit for malting. However, we must always be willing to learn and not stand on pet theories. If that which I always considered right is proven to be wrong, I am most willing to stand for the improvement. I am well aware that when we raise a barley which will easily lodge, that barley is not the right kind to raise; for when a barley lodges it is beyond the point where it can be used for malting purposes; and I hope that Mr. Bock is right in his contention. Then it should be our duty, no matter what our theories have been, to change them and to adopt something which is shown to be better.

Aaron Aaronsohn, the head of one of the largest agricultural experiment stations in the world, located at Haifa, Palestine, has been visiting in Chico, Cal., the guest of Superintendent Beagles of the Government Plant Introduction Garden.

Captain J. M. Phillips of Newton, Kan., recently celebrated his eighty-fourth birthday anniversary and was the recipient of 84 American Beauty roses from his friends on the Board of Trade. He has dealt in everything during his long successful life from flatboat loads of vegetables down the Ohio

and Mississippi rivers to the South, to grain, cotton and stocks.

REGULATING BONDING COMPANIES.

An action was recently brought on appeal by the Dakota Trust Company against the South Dakota Railroad Commissioners, the District Court on trial of the action having entered an order prohibiting the Commission from canceling certain warehouse bonds, written by the plaintiff, because of a settlement made by the company in the case of Samuel Kittler of Turtle Lake that was unsatisfactory to the Commission, the company having compromised claims against Kittler, whereas the Commission contended full settlement should be made, and upon the refusal of the company to comply with the demands of notice given by the Commissioners that they would require new bonds to take the place of the bonds written by the Trust Company for other elevators. The District Court held the Commission had no authority to cancel or refuse to approve the bonds written by any company authorized to do business in the State, and the question was submitted to the Supreme Court. Before that court handed down its decision the plaintiff, the Dakota Trust Company paid all the claims against it, and having complied with the demands of the Commission is now in good standing with the department.

The Supreme Court, however, in a decision rendered on November 25, sustained the position taken by the Commission. The gist of the decision is in the following points:

"1. Where prohibition proceedings are brought to restrain the Board of Railroad Commissioners, created by the statute of this State, from acting in alleged usurpation of powers in questioning the sufficiency of bonds given by the grain elevators under Section 2247, R. C. 1905, for the protection of the patrons of such warehouses, and from inquiring into the settlements made by the surety or bonding company with the creditors of an insolvent warehouse; and such bonds have expired by lapse of time before the appeal is heard, such appeal will not be ignored as a moot question, the matter being one of public interest and the real matter in controversy being the authority and power of said Commission.

"2. Under Section 2247, R. C. 1905, which requires operators of grain elevators to file with the Board of Railroad Commissioners a bond running to the State, with good and sufficient sureties to be approved by such Commissioners and conditioned for the faithful performance of their duties as public warehousemen, and under Section 2242, R. C. 1905, as amended by Chapter 230 of the Laws of 1909, and which, among other things, gives to the Board of Railroad Commissioners the power 'to investigate all complaints of fraud or oppression in the grain trade of this State and correct the same,' such Board may examine into the sufficiency of such bonds both as to the form and the general business conduct and reliability of the sureties, and for such purpose may summon any witnesses before them that they please. Whether they can, in such cases, by court procedure or otherwise, compel the attendance of such witnesses and require testimony under oath is a matter not here determined.

"3. In passing upon the sufficiency of bonds furnished by the elevator companies, or the necessity of requiring new bonds, the jurisdiction of the Board is over the elevator companies rather than over the bonding companies or sureties. It has, therefore, no right in case of a controversy between the ticket holders of an insolvent elevator company and a surety or bonding company, to summon the said bonding company before it and threaten to cancel its bonds unless it so appears and makes satisfactory settlement with the said ticket holders. It may not seek by such means to force a settlement. It may, however, inquire into the transaction for the purpose of satisfying itself as to the business reliability of said bonding company, and if dissatisfied with the good faith or business methods of said surety, require other bonds to be given by the elevator companies.

"4. While passing upon such bonds and performing such duties, such Board is acting in a quasi-judicial capacity, and cannot be controlled in the exercise of its discretion by mandamus or prohibition.

"5. The mere fact that a surety company has been licensed by the Insurance Commissioners to do business within the State of North Dakota does not authorize such a company to compel the approval of its bonds by the Board of Railroad Commissioners, if sufficient as to form and amount, if such Commissioners are dissatisfied with the business habits or conduct of the surety or for any other similar reason believes the bonds to be insufficient.

"6. A mandamus cannot be brought by the surety on a bond to compel the acceptance or continued approval of such instrument. If proper at all, the proceedings should be brought by the principal and not by the surety. The same is true of the writ of prohibition, when sought to be obtained to prevent a hoard which is vested with the power of approval from disapproving its said bonds."

HAY AND STRAW

The Ohio Hay Co. of Tiffin, Ohio, has gone into bankruptcy.

John Rundquist will erect a hay and feed warehouse at Graston, Minn.

J. C. Fogelsanger has engaged in the hay business at Shippensburg, Pa.

W. B. Colyer will retire from the hay and straw business at Central Bridge, N. Y.

The T. B. Hord Grain Co. of Archer, Neb., has purchased the hay business of William O'Connor.

Hanks & Co., who have conducted a commission, hay and straw business at Jersey City, N. J., for the past 30 years are about to retire from business.

Many New Mexico farmers have made five cuttings of alfalfa this year in spite of the late spring, and it is said that the greater part of the season's crop has been sold.

It is reported that the increased crop of hay in Kansas has made the price at Topeka from one to two dollars less than it was for the corresponding period last year.

It has been estimated that Yakima County, Cal., will produce approximately 15,000 carloads of hay this year. This is principally alfalfa raised on the Yakima reservation.

Sanders, Meier & Fowler of Riverside, Cal., wholesale hay and grain dealers, have completed a store building, 40 x 72 feet in size. The former store building has been removed to the rear of the lot and is being remodeled for use as a barley mill and warehouse.

Two unusual crops were produced in Hodgeman County, Kan., this year by C. C. Cogswell. These were kowliang, a food for man, and hudan urra, a forage crop, both of Chinese origin. They were produced under the direction of the State Agricultural College and the United States Department of Agriculture.

Beginning on December 3 New York quotations given for hay and straw will be based on the amended grades adopted at the last convention of the National Hay Association, which grades have since been adopted by a large number of hay dealers' associations, including the New York Hay Exchange Association. These rules are those applicable to hay and straw only.

According to a statement issued by County Horticultural Commissioner F. C. Schnell there are no evidences of alfalfa weevil in Fresno County, Cal. The investigation of the alfalfa fields was made at the request of State Horticultural Commissioner Cook, following the agitation as to the importation from Utah of young nursery stock infected with the weevil. It is reported that the most minute search has failed to reveal any evidence of the insect.

Prof. N. E. Hansen of the State Agricultural College of South Dakota has been transplanting alfalfa in Stanley County in the State. It is reported that Prof. Hansen is working to cover the prairies of the western half of the State with alfalfa and the plants with which he has been working are natives of Siberia. It is said that they grow in that country under conditions similar to those in South Dakota with the exception that the degrees of heat and cold are greater and the rainfall less.

It is reported that the alfalfa lands of the San Joaquin Valley in California are endangered by the nursery stock that is being shipped into the State. It has been declared that young apple trees are being delivered wrapped in various kinds of hay and forage coming from the parts of Utah where the weevil has created the greatest havoc. It is stated that the Supervisors of Inyo County have taken up the matter and will agitate it to every county in the San Joaquin Valley if possible.

The Chamber of Commerce at Moscow, Idaho, recently passed resolutions protesting against the quarantines against alfalfa issued by the States of California, Oregon and Washington. Dr. W. L. Carley, director of the Idaho experimental stations, stated that there were but two counties in the entire State affected with the scale or weevil, those being Oneida and Bear Lake. A meeting of the associated commercial bodies of Idaho has been called to present to the coming legislature an act to authorize Idaho to exercise quarantine regulations against the two counties in which the alfalfa is infected, that the remainder of the State may be released from the barrier placed against it by other states.

The Berlin method of handling bucket-shop owners is worthy of notice, at least. Foreign shops do business principally by mail, circulars sent out from London and Paris or by advertisements in a certain class of newspapers. As the German courts cannot reach these firms, the Central Association of German Bankers has for some time been carrying on a campaign against them by printing in the newspapers lists of all such foreign bucket shops as try to do business in Germany and by warning the public against them. Lately the authorities seized the per-

sons of three of the so called "bankers." These were prosecuted by the Central Association, which succeeded in having them sentenced to imprisonment, one for three years and two for five years. Another man was fined for infringing the law against unfair competition through advertising his business as a bank. He had formerly been a waiter and had made it a practice of lending money to students.

"KING CORN."

Corn seems to be a term applied to various grains in different parts of the world. Broadly speaking, corn does not describe any particular form or style of grain or kernel. It appears that its meaning depends upon the understanding of the people of that quarter of the earth in which it is used, and it varies according to the style of the grain. What would be understood as corn in one part of the world would not be recognized at all as corn in another.

At the same time, commercially speaking, there is only one description of corn, and that is the familiar type known as Indian corn—Southern corn, sweet corn, popping corn, all of which varieties of corn, especially the Southern variety, quite closely resemble in general appearance the sugar cane; indeed, corn and sugar cane are not so very distantly related, says the *New England Tradesman*. This is proved not only by the fact that they bear a striking resemblance, but to the fact that corn stalks contain sugar, although, of course, to an infinitesimal degree when compared with the sugar contained in the sugar cane. Another proof is that from corn, that is, from the kernels, is produced grape sugar and glucose, two very important articles of commerce.

The Indian corn, or maize, is puzzling and little understood by many people; that is, people do not understand which variety of corn cultivated in this country is really the maize, or corn, of the Indians. We believe that none of the corn now cultivated is the direct descendant of the Indian corn, or maize, such as was found cultivated by the Massachusetts Indians by the Pilgrims on their arrival on this coast, but, according to the best authorities, the yellow or flint corn of New England is the nearest relative to the maize, and it may be a direct lineal descendant.

It is very doubtful if the long, triangular kernel corn raised largely in the South, in the Middle States and in the West has any relation to the Indian corn, or maize. The Western or Southern corn we have seen growing under most favorable circumstances in the West and we have seen it growing in the South as far down as Georgia; we have also seen it matured in the southern part and the southwestern part of New York State; it will not mature, however, in New England, and if planted produces no ears, or, at least, if any, it produces very rudimentary ears. It is the corn planted in New England as ensilage corn and produces only fodder, says the same journal.

It is needless to describe either of these varieties of corn, although we can scarcely refrain from dwelling upon the beautiful, yellow corn grown in New England; for what is there more beautiful than a long, heavy trace of perfectly filled out ears of the yellow field corn grown in New England? Many retain many pictures of broad barn floors, with hay lofts on either side and shooks and baskets of corn around, and of old herb-scented attics with the floors covered with the corn for drying, to be ground into meal later in the winter, where great traces of corn, saved for seed, hung from the rafters and the beams. They have in New England sweet corn also, of many varieties, and two varieties, at least, of pop corn.

Indian corn, or maize, which consists of a cob and kernels, known as the "ear," does not flourish over a great extent of the earth's surface. It does not, indeed, flourish very readily at sea level south of Texas; but there it is one of the principal crops and Texas is one of the greatest growers of corn in the Union. From east to west the latitudinal range of the corn does not vary materially, although the varieties are different in different parts of the country, as the South, the Middle West and the East. Corn cannot be grown to any extent in New England north of central Vermont, and in the northern part of Vermont it is almost a prohibitive crop, as it is in nearly all of Canada, for the reason that the seasons are too short to permit it to mature; hence, we find that the Canadian northwest does not figure at all as a grower of corn. The reason is obvious.

Corn will not grow in a country where there are not hot days and hot nights, especially hot nights; and anyone who has been so fortunate, in some ways, and unfortunate in others, as to ride across the plains of our great corn growing States, such as Indiana, Illinois, Iowa, Kansas and Nebraska, will understand why, for one reason at least, those States are such great corn producers.

John F. Beatty is buying grain for the Hunting Elevator at Blooming Prairie, Minn.

FIRES-CASUALTIES

The Occidental Elevator at Laurel, Mont., was completely destroyed by fire Nov. 28.

James Riddle of Cass City, Mich., injured one hand in a roller in the elevator of the Cass City Grain Co. recently.

The elevator at Bemis, S. D., owned by F. A. Brown of Pipestone, Minn., was destroyed by fire recently.

L. R. Zellers was instantly killed in his elevator and feed mill at Blackburn, Mo., recently when a boiler exploded.

The elevator at Cicero, Ind., owned by E. E. Cornthwaite was destroyed by fire Nov. 30, entailing a loss of \$5,000.

The Powell and O'Rourke Grain Co.'s elevator at St. Louis, Mo., was struck by lightning Nov. 16 and damaged to the extent of \$5,000.

In a recent fire which swept the town of Brookneal, Va., the Brookneal Feed and Seed Co. suffered a loss of \$2,000 with no insurance.

Thomas Byrne was smothered in a grain pit in Montreal, Que., Nov. 16, and Robert Hamilton was seriously injured while trying to rescue him.

Miss Lena Flamme of Kingsley, Iowa, was seriously injured recently when she caught her dress in the machinery in the elevator at that place.

Jacob Fischer, a grain buyer at Harvey, N. D., was killed on December 10, while crawling under moving cars. He leaves a widow and five children.

Fire of unknown origin destroyed the Garrett Bros.' elevator at Letts, Iowa, recently, with 4,000 bushels of grain. The house was insured for \$4,600.

Adam Metzger of Kappa, Ill., recently caught his hand in the sprocket wheel of the conveyor in F. S. Larison's elevator at El Paso, Ill., and fractured his finger.

An elevator and warehouse of the Ohio Cereal Company of Circleville, Ohio, were reduced to ashes Nov. 16 when the company's milling plant was burned.

The elevator of the Lebanon Feed and Grain Co. at Lebanon, Tenn., was damaged by fire to the extent of \$400, Nov. 19. The loss is partially covered by insurance.

The seed house at Gunter, Texas, belonging to the Pilot Point Gin Co. was burned Nov. 21. It contained many tons of cotton seed and a great deal of meal and hulls.

Fire, supposed to have originated in the engine room, recently destroyed the granary and barn of the State Reformatory at Gatesville, Texas, together with 20,000 bushels of grain.

Fire of unknown origin completely destroyed the Reynolds Elevator at Parker, S. D., on December 4. The heaviest loss was on the building, as there was very little grain in the house.

Fire which is believed to have been of incendiary origin destroyed a grain warehouse at Avon, Pa., owned by Charles Z. Weis. The building contained considerable hay, grain and straw.

Fire of unknown origin completely destroyed the buildings of the Fort Lupton Mill and Elevator Co. at Fort Lupton, Colo., recently, entailing a loss of \$10,000, partially covered by insurance.

The Imperial Elevator at Perth, N. D., was destroyed by fire recently, the blaze having originated, it is believed, from an overheated journal. There were 17,000 bushels of grain in the building.

The Farmers' Elevator at Howard, S. D., was burned to the ground Nov. 22. The house was valued at \$4,500 and contained 30,000 bushels of grain valued at \$15,000. Both were covered by insurance.

The elevator at Bremner, about fourteen miles east of Edmonton, Alta., was totally destroyed by fire Nov. 27. The house contained over 11,000 bushels of grain and was the property of the Alberta Grain Co.

The elevator at Wheaton, Mo., owned by the Neosha Milling Co. of Neosha, Mo., was struck by lightning recently and burned with about a thousand bushels of wheat. The loss was partially covered by insurance.

A car of wheat on the M. & St. L. tracks at Minneapolis was backed off a switch Nov. 16 and the entire contents were spilled. The wrecking crew was called into service and the greater part of the grain was saved.

The elevator at Worstville (R. F. D. from Payne), Ohio, was burned to the ground Nov. 23. The origin of the fire is unknown. The house was owned by John Marquardt, whose loss is about \$10,000, covered by \$7,000 insurance.

The elevator at Perdue, Sask., owned by the Maple Leaf Milling Co. was destroyed by fire recently. The buyer, E. Smith, was sleeping in the engine room, but the fire had made considerable progress before he was awakened. Fourteen empty box cars were standing on the siding near the elevator, but through the united efforts of citizens all were saved except

PERSONAL

two. The house contained about 8,000 bushels of grain.

The 3-story frame building formerly occupied by the H. L. Elliott Co., Minneapolis, as a hay and grain storehouse was damaged by fire recently to the extent of \$2,500. The building contained considerable hay at the time of the fire.

The seed house of the Pecan Gap Cotton and Oil Co. at Pecan Gap, Texas, was burned recently, entailing a loss of between \$35,000 and \$50,000. There were 3,000 tons of seed in the building. The property was covered by insurance.

A wheat elevator and two granaries were consumed by fire during the destruction of the Sharpsburg Roller Mills at Sharpsburg, Ky., recently. The elevator was a 25,000-bushel house and the property was owned by M. V. Bostain of Carlisle, Ky.

The elevator at Larkinsburg, Kan., the property of the Western Elevator Co., burned recently with several hundred bushels of corn. The cause of the fire was supposed to have been from spontaneous combustion in the dust bin. The company plans to rebuild at once.

The Independent Grain Co.'s elevator at Canova, S. D., was destroyed by fire December 4, together with the coal sheds and a corn crib. Three carloads of coal and over 5,000 bushels of grain burned. The insurance on the building was \$5,000 and \$3,000 was carried on the grain.

Alva Johnson, an employe in F. R. Pence's elevator at Pence, Ind., was caught under a flood of oats while attempting to clean out a clogged loading spout and was suffocated. It is said that he had been warned as to the danger, but ignored it. He is survived by a wife and six children.

W. T. Shute lost his new elevator at Penalosa, Kan., by fire recently. The house was built last summer at a cost of \$4,500 and had a capacity of 15,000 bushels. There were about 1,000 bushels of grain in the elevator at the time of the disaster. Mr. Shute will rebuild in the spring.

The King Alfalfa Mill at Nebraska City, Neb., was burned Nov. 23, the buildings, machinery and stock having been totally destroyed. The loss was estimated at \$150,000 with \$80,000 insurance. The buildings were erected for the Argo Starch Co., which plant was dismantled many years ago.

Dare & Layton's elevator at Chesterville, Ill., was burned at midnight on Nov. 22, at a loss of \$15,000. The insurance amounted to \$6,000. The house contained about 10,000 bushels of grain. It is thought that the fire originated from a hot box in the machinery room. The owners will rebuild.

Hugh, the sixteen year old son of James C. Roe, was severely injured while working in his father's elevator at Hayes, Ill., on Nov. 17. His glove was caught by a cup while he was cleaning out the elevator buckets and before the machinery could be stopped both bones of the upper arm were crushed and the forearm was badly cut and bruised.

The National Elevator at Garnes, near Metcalf, Ill., was completely destroyed by fire Nov. 19, with 5,000 bushels of corn. The loss was estimated at \$12,000 with partial insurance. The house was the property of the National Elevator Co. of Indianapolis, which lost two elevators in Edgar County by fire within four days, the other building having been at Mortimer.

Fire damaged the cupola of the old Frontier Elevator, adjoining the plant of the Washburn-Crosby Milling Co. at Buffalo on December 4. The old structure, which is the property of the milling company, is being razed to make way for an addition to the plant. All machinery had been removed and there was little of value left in the building. The damage will not exceed \$2,000.

J. M. Current, a grain dealer at Homer, Ill., is suffering with a badly injured eye as a result of an accident which occurred in his elevator recently. Mr. Current and one of his employes were trying to clean out a clogged cob chute when the long pole with which the employe was working slipped through the chute, struck Mr. Current below the eye and cut a gash which necessitated four stitches.

Philip Deichman, an employe of the Windsor Grain Co. at Windsor Ill., was painfully injured recently while preparing to dump a load of corn. The door stuck and he kicked it loose, his left leg slipping into the opening. The loaded wagon dropped, pinning him down. The horses were urged forward, but before he could be removed the wagon backed down on him again, and he suffered a compound fracture of both legs.

J. M. Black's elevator at Lebo, Kan., was struck by lightning recently and the fire resulting completely destroyed the elevator, an office and two warehouses. The elevator contained more than 2,000 bushels of corn, and four cars of mill feed were stored in the warehouse. Forty tons of hay and a team of mules were also burned. The loss was estimated at \$10,000 with probably \$8,500 insurance. As the scales were not damaged, Mr. Black will continue buying and selling while new buildings are under construction.

R. J. Jones has been engaged as buyer for the new Brown Elevator at Oldham, S. D.

Joseph Dawson is now bookkeeper for the Farmers' Elevator Co. at Dawson, Ill.

A. E. White has resigned his position as manager of the Zorn Grain Co. at Ogden, Ill.

William Sutphin has been appointed manager of the Lincoln Grain Co. at Lincoln, Ill.

A. R. Hoskin of Cedar Rapids, Iowa, is manager of E. A. Brown's elevator at Fulton, Ill.

Alfred Erickson has been engaged as buyer for the Atlantic Elevator at Kennedy, Minn.

I. M. Southwick has been engaged as buyer for the Hunting Elevator Co. at Pemberton, Minn.

S. L. Zea has resigned his position as manager of the Farmers' Elevator Co. at La Hogue, Ill.

A. J. Fitzsimmons has succeeded J. K. Johnston as agent of the Federal Elevator at Glyndon, Minn.

P. H. Johnson has been engaged as buyer for the Pigeon Grain and Stock Co. at Pigeon Falls, Wis.

Mr. Hanna of the Hanna Grain Co. of Oklahoma City, Okla., has been seriously ill with the grippe.

Robert Allen has resigned his position as agent for the Northland Elevator Co. at Lansford, N. D.

C. H. Nyberg has succeeded C. H. Peterson as manager of the Imperial Elevator at Kennedy, Minn.

Joseph Quintel of Montreal was a recent Chicago visitor and was buying corn for distribution through Canada.

George Warren, who has been superintendent of elevator "A" at Indianapolis for 35 years, has resigned.

Geo. C. Miller of Lake Preston, S. D., succeeds F. H. Ainsworth as manager of the Atlas Elevator at Aurora, S. D.

George Hudson of Charleston, Ill., is now manager of the new branch of the Brown-DeField Grain Co., at Cairo, Ill.

V. I. Penniwell, formerly of Wichita, Kan., has removed to Thomas, Okla., to take charge of a line of country elevators.

C. O. Ramer of the United States Feed and Grain Co. at Memphis, Tenn., recently married Miss Dixie Carroll of Kenton, Tenn.

William H. Stearmer of Lawton, Okla., has accepted a position with the Farmers' Mill and Elevator Co. at Hobson, Mont.

Jesse Simpson, who is connected with the Farmers' Elevator at Danvers, Ill., married Miss Agnes Corey at Danvers, recently.

Charles N. Bell, secretary of the Winnipeg Grain Exchange, has been elected president of the Canadian Club at Winnipeg, Man.

George C. Brinkerhoff, formerly manager of the Long Dock Mill and Elevator Co. of Jersey City, N. Y., has resigned his position.

Peter Greenfield of Des Moines, Iowa, has accepted a position as manager of the Wright & McWhinney Elevator at Lohrville, Iowa.

J. E. Munson, formerly of Virginia, Ill., is now manager of the Farmers' Elevator at Richland (R. F. D. from Pleasant Plains), Ill.

Robert Shinker, formerly with the E. D. Risser Grain Co. at Ludlow, Ill., is now bookkeeper for the Farmers' Elevator at Ashkum, Ill.

Earl Saddler has been appointed manager of the Zorn Grain Co.'s elevator at Ogden, Ill., to succeed A. E. White, who resigned recently.

John Turner, who has been manager of the elevator at Bardolph, Ill., has accepted a position as manager of the Cole Elevator at Adair, Ill.

N. P. Bouck, formerly manager of the elevator at Clearwater, Neb., has resigned his position to accept a similar one in the elevator at Kennard, Neb.

W. M. Sloan, representative for the Grain Dealers' Fire Insurance Co., became associated with the Smith-Mann Grain Co. of Kansas City, Dec. 1.

Frank E. Huhn, formerly of the Huhn Elevator Co. of Minneapolis, has removed to Fort William, Ont., where he is associated with N. W. Paterson & Co.

H. J. Flander, Jr., who has been general bookkeeper for A. Brandeis & Son for several years, has resigned and entered the grain business on his own account.

C. E. Richmond has disposed of his elevator interests at Linton, N. D., and has removed to Plainview, Minn., where he has acquired other elevator holdings.

V. S. Beall, formerly with the Neola Elevator Co. at Grand Junction, Iowa, has removed to Garwin, Iowa, where he will have charge of the Farmers' Elevator.

Clarence A. Euler of C. A. Euler & Co., grain and hay commission merchants of Baltimore, Md., has been at a mountain resort for several months in

the interest of his health and hopes soon to return to business activity.

Morgan Shippy has succeeded Mr. Cotherman in the Hillmer Elevator at Dakota, Ill., and the latter expects to accept a similar position in a South Dakota elevator.

Hans Hansen has resigned his position as grain buyer for the Rothschild, McCaustland Grain Co. in Brayton, Iowa, and Charles H. Gustafson of Dayton, Iowa, has succeeded him.

Frank Stewart, an employe in the elevator of the American Hominy Co. at Sadorus, Ill., was suddenly taken ill in the elevator recently and was removed to his home on a stretcher.

Albert Tone, manager of the Farmers' Grain Co. at Story City, Iowa, was recently presented with a gold watch by the directors and officers of the company at a banquet given in his honor.

William Melrose, who has been the manager of the Flugstad Elevator at Webster City, Iowa, for several years, has resigned his position and may accept a similar position at Blairsburg, Iowa.

Louis Wermelskirchen, who has been inspecting grain in Amarillo, Texas, has received the appointment under the Civil Service Commission as scientific assistant grain inspector at Washington, D. C.

SOME PROTESTS.

At a meeting of the Wabash local division of the Illinois Grain Dealers' Association, Thursday, November 21, and also at a meeting of the Paris local division held Friday, November 22, the following resolutions were unanimously adopted:

Resolved, That the preamble and resolutions adopted by the Champaign division of this Association October 13, 1912, in relation to the shortage of cars for the shipment of grain be and the same is hereby affirmed as the sense of this meeting; and that the secretary be directed to forward a copy of same to the Railroad and Warehouse Commission; and that the board of directors of the Association be requested to take such action as may in their judgment seem best to remedy the present conditions.

Resolved, That we enter our positive protest against the increase of commissions for handling grain as were made effective November 1 by the Corn Exchange of Buffalo, N. Y.; and that while this rule is active we will use our best efforts as individuals to forward our consigned grain to other markets, and make every effort possible to reach the consumer in the East directly.

Resolved, That we are opposed to the increase of freight rates under the scheme now proffered by the carriers of grain in Illinois, believing it will in effect prohibit Illinois shippers from having access to the Southern markets; and that we approve the prompt and efficient action of our officers in thus far preventing its being put into effect.

Resolved, That the secretary be directed to forward a copy of the last resolutions to the Corn Exchange of Buffalo, N. Y., and to the railroads where needed; and we respectfully request the board of directors of this Association to carefully consider these matters at their next meeting.

The National Elevator at Mortimer, four miles southwest of Ridge Farm, Ill., was burned Nov. 22 with 22,000 bushels of corn. Five thousand bales of straw belonging to William Bines of Ridge Farm were stacked near the elevator and were also burned, causing Mr. Bines a loss of \$800. The elevator is the third house which has been destroyed by fire in Mortimer during the past eighteen months. It was the property of the National Elevator Co. of Indianapolis.



YES, THERE ARE ALWAYS OTHERS BESIDES THE U. S. Johnny Bull surely can take his time in buying. You see Miss Canada and Mr. Russia, Argentine, etc. NOTE.—Twenty years ago today [Dec. 7, 1912] the Red Letter contained the first "cartoon" on market conditions. It has had one every Saturday since, and while it's mighty hard some days to get up something interesting, we hope the record will go on for another twenty years.—Zahm's Red Letter.

FIELD SEEDS

Noole Bros.' seed warehouse at Gibson City, Ill., is now completed.

The Dakota Seed Co., Mitchell, S. D., has put in a mechanical package filler.

The new seed warehouse of Noble Bros., at Gibson City, Ill., has been completed.

The seed corn houses at Mason City, Ill., are filling up with seed, about 70,000 bushels being now in store there.

The Central Kentucky Blue Grass Seed Co., is building a seed cleaning plant at Lexington, Ky., to cost about \$25,000.

Oregon (western) clover seed farmers have suffered considerably through a wet harvest, and the yield of good seed is much reduced.

A brisk demand is reported in California for Turkestan alfalfa seed, but the supply is so ample the price has fallen from 25 to 19 cents at most markets.

Illinois seed corn is said to be of exceptionally good quality this season, but its care through a winter will require knowledge and good judgment.

The second Vermont State Corn Show was held on Nov. 6-8 at White River Junction. The building used was 300x90 feet in size, and the space was all utilized.

The few samples of new Canadian beans received at Montreal to Nov. 23 show a quality this season that is very inferior. The only beans that are attracting any attention are Austrians, which are held at about \$2.70.

Clover seed shipments from Austria-Hungary have been very large this year, the amount for the first six months being 5,800,000 pounds, against 5,600,000 pounds in the same period last year. The United States bought 25,000,000 pounds of foreign clover seed in the fiscal year 1911, but only 2 per cent of it is credited as coming from Austria-Hungary.

S. G. Courteen, seedsman, is building at Lake and Hanover St., Milwaukee, a reinforced concrete warehouse 150x300 feet in size and from eight to eleven stories high. The seed cleaning department will be at the top of the highest part of the building. There will be a storage room for 75,000 bushels of seed grain in bins. The plant will be fireproof and is under contract to Barrett & Record Co., Minneapolis.

The Northfield Seed & Nursery Co., Northfield, Minn., has been incorporated, the board of directors being composed of C. O. Nichols, O. V. Sherpy, J. L. DeLancey, J. M. Punderson, all of Northfield, and J. W. Punderson, of St. Paul. The company is a reorganization of an old business, the property consisting of seed farms, packing and storage houses, etc. The seed corn department is directed by C. O. Nichols.

The New England Corn Show was held in Boston on Nov. 20-24. There were more than 1,000 exhibits and the premium list aggregated \$4,000 in cash besides the trophies. Among the latter were two massive silver cups known as the President Taft Cups, which were the grand sweepstakes prizes. There were also six silver cups offered by the governors of the six New England States, and several other cups given as prizes in the students' and corn growers' judging contests.

The Vogeler Seed & Produce Co. of Salt Lake City, has completed a new warehouse. The structure is three stories high, built of brick and concrete with an attractive front of pressed brick. The warehouse has floor space aggregating 36,000 square feet and is connected with an older warehouse, giving a total of 50,000 feet floor space in the two. They will include seed grading and cleaning machines that will be operated with electricity. The warehouse capacity of the company is now 150,000 bushels.

Sweet clover seed, which some Ohio, Kentucky and Illinois farmers are growing in place of alfalfa for feed, is coming into good demand and bringing about the same price as alfalfa. There are two varieties of melilotus, as it is rightly called, the white and the yellow, the white making a ranker growth and being recommended for plowing under as a green manure; while the yellow is grown for forage. Some farmers of the Eastern and Southern States are beginning to make greater use of this crop for renovating wornout lands.

The clover seed midge, *Dasynceura leguminicola*, Lint., present in most of the clover States, attack both the white clover and alsike, as well as its favorite host, the red clover. The midge prevents the formation of the seed, the larvae entering the flower buds and feed on the contents of the ovaries of the flowerets. The injury becomes serious the second season, and increases each year the field is allowed to run. The adult female fly is so small and active that it is seldom seen in the field. It has a single pair of wings, long slender legs and a pinkish body. Under the microscope the head and dorsal surface of the thorax are either black or dusky, and the abdomen salmon pink with smoky shades. It is about two millimeters long; when

the ovipositor is extended it is nearly six millimeters in length.

The Government's seed distribution will begin about Jan. 1. It is said, in justification, perhaps, that, "plans for a special distribution of seeds adapted to dry land conditions are being made by the bureau of plant industry. The object is to distribute the seeds in the great plains area and other dry sections for demonstration purposes."

The annual free seed distribution of the Canadian experimental farms will consist of spring wheat (5 lbs.), barley (5 lbs.) and field peas (5 lbs.), all to be sent out from Ottawa. A distribution of potatoes (in 3 lb. samples) will be carried on from several of the experimental farms, the Central Farm at Ottawa supplying only the provinces of Ontario and Quebec. All applicants must give particulars in regard to the soil on their farms, and some account of their experience with such kinds of grain or potatoes as they have grown, so that a promising sort for their conditions may be selected.

SEED IMPORTATION ACT.

The Secretary of Agriculture designated Tuesday, December 10, 1912, as the date for a hearing on the rules and regulations to be promulgated by him for the enforcement of "An act to regulate foreign commerce by prohibiting the admission into the United States of certain adulterated grain and seeds unfit for seeding purposes."

This act prohibits the importation into the United States of all seed of alfalfa, Canadian bluegrass, Kentucky bluegrass, lawnless brome grass, clover, meadow fescue, millet, orchard grass, rape, red-top, and timothy when adulterated or when containing more than three per cent by weight of weed seeds. It also prohibits the importation of seed of alfalfa and red clover containing more than ninety dodder seeds per pound. Further, it prohibits the importation of seed of barley, buckwheat, field corn, Kaffir corn, flax, oats, rye, sorghum, and wheat intended for seeding purposes when such seed is adulterated or contains more than three per cent by weight of weed seeds.

CALIFORNIA LIMA BEAN CROP.

The Lima Bean Growers' Association of California has made an enquiry into the crop yield of the season. It is found that the shortage is approximately 10 per cent. A report to the *Journal of Commerce* says: "It is held to be doubtful whether most of the growers themselves realize how large the crop really was, and it is asserted to be evident from information given out by the independent operators that either they do not know the size of the crop, or are endeavoring to induce the trade to believe that the shortage is greater than the association's canvass shows it to have been, in which latter case it would appear that the object of the independents is to boost the market so as to unload some of the beans they bought at very high prices."

"The stock on hand Nov. 1 in all California warehouses was equal to 740,000 bags of 80 pounds each, which is less than the amount on hand a year ago at the same time. The shipments were said to be quite as heavy as in 1911. The greater part of the business this year was done in the central West. Eastern markets, it is said, have not as yet bought anything to speak of and stocks in the hands of country jobbers are practically nil."

SOME OBSERVATIONS ON SEED CORN.

In spite of the flood of printed matter circulated among farmers relating to seed corn, and in spite, too, of the oral instruction of lecturers on the same subject, the *Nebraska Farmer* makes note of a fact, common to every corn State, that "a very large number of farmers, for one reason or another, will pick their seed corn from the wagon while husking, or later from the crib." This procedure is deprecated, but it is a common one. The question then arises, what shall be the standards controlling such selection of seed? The *Farmer* lays down no fixed rules, but makes the following suggestions:

(1) It has been proved by experiments at the Nebraska station that the very rough, deep-kernelled ears do not on the average yield as high as smoother ears with shallower kernels; moreover, that a somewhat longer and slimmer type of ear gives a higher yield than the type of ears that has been considered ideal. The long, smooth type of ear matures earlier, too, than the shorter, "chunky" type.

(2) Seed ears should not necessarily be big ones. Size is not necessarily hereditary. A test of nineteen varieties of corn at the Nebraska station showed that the large-eared corns were seldom the highest yielders.

(?) The shelling percentage is not as important as formerly considered. "The shelling percentage of the long, smooth type of ear, found to be the best yielder at the Nebraska station, was not greatly different from the rougher, deeper-kernelled type."

"But even if there were a great difference in the shelling percentage between deep- and shallow-kernelled ears the comparative size of the cob pile and

shelled corn pile would not be so important as the amount of shelled corn per acre. At the Ohio station a lot of mother ears that shelled out only 82.7 per cent when planted yielded more shelled corn per acre than another lot of ears that shelled out 86.7 per cent corn to cob.

"The depth of kernel does not seem to be an important factor in yield, but it does vitally affect the time of maturity. The extra large, deep-kernelled ears ought to be passed up in selecting seed corn from wagon box or crib, because they are generally late maturing."

LOW GRADE HAIRY VETCH SEED.

The Secretary of Agriculture has issued a warning to prospective purchasers of hairy vetch seed against certain lots of low grade which are now being offered by wholesalers to the smaller dealers.

The greater part of the hairy vetch seed used in the United States has thus far been imported from Europe. Among recent importations there are a number of seed of low quality, containing from 15 to 80 per cent of hairy vetch seed, the rest being either cultivated forms of spring vetch, which are not hardy in the Northern states, or of various species of wild vetches of doubtful value for agricultural purposes. This low-grade seed is now being offered by wholesalers to smaller dealers throughout the country and is thus being widely distributed.

The price of hairy vetch seed is higher this year than in any previous year, due largely to the increasing demand for this seed as the advantages of hairy vetch as a winter cover crop are becoming known. With the present high price of seed it is especially important that persons wishing to sow hairy vetch should obtain only pure seed, as the money paid for poor seed is wasted and a failure of the crop is sure to follow its use.

Persons unfamiliar with the botanical characters by which hairy vetch seed can be definitely distinguished from the seed of the other vetches that are used as adulterants can in most cases avoid the use of adulterated seed by carefully examining the seed for points of distinction.

The seed of hairy vetch is spherical, varying from 3-32 to 5-32 of an inch in diameter, with an average diameter of approximately $\frac{1}{8}$ of an inch. The seeds of most of the other vetches are more or less irregular in form, being lense shaped or flattened at the ends where they were crowded together in the pod. They vary in size, some being smaller and others larger than hairy vetch. By spreading a small quantity of the mixed seed thinly on a piece of cardboard or other smooth surface and tilting it slightly with a gentle shaking motion, the hairy vetch seeds, which are spherical, will roll off, leaving behind most of the seeds which are used as adulterants. Hairy vetch seed is dull grayish black with a greenish tinge when the seed is fresh, although this greenish tinge is not present in imported seed, which is usually at least one year old when it is offered for sale in this country. The seeds of the other vetches found mixed with hairy vetch seed vary greatly in color, some being light gray mottled with brown and black, some uniformly brown, and others glossier and blacker than hairy vetch.

The color of the crushed seeds is also an indication of the presence or absence of adulterants, the crushed seed of hairy vetch being a bright lemon yellow in color.

The seeds which are used as adulterants of hairy vetch seed for the most part vary in color from a dark fawn to a reddish orange or salmon color. If a small amount of seed is crushed the presence of any other color than bright lemon yellow indicates the seed is adulterated. If the seed is not spherical it is not hairy vetch; if the seed is not uniformly a grayish black color with a greenish tinge in fresh seed it is not hairy vetch; if the inside of the broken seeds is not lemon color it is not hairy vetch.

By a careful examination of any seed offered for sale with the above suggestions in mind, any one can be fairly sure of discovering the presence of adulterants. If there is still any doubt, samples should be submitted to the nearest state experiment station or seed testing laboratory for critical examination. Further information will be found in the following forthcoming publications: Bureau of Plant Industry Circular 102, Production of Hairy Vetch Seed, and Farmers' Bulletin 515, Vetches.

P. F. Stone has accepted a position with the Johnson-Olson Grain Co. of Duluth, Minn.

Guy Mitchell has been engaged as superintendent of the Lawton Mill and Elevator Co. at Lawton, Okla.

L. R. Whiting, who has been managing the Powers Elevator at Bismarck, N. D., will occupy a similar position with the same company at Barlow, N. D.

Harry H. Bingham of the Bingham-Hewett Grain Co., of Louisville, Ky., has been ill for some time with throat trouble. A slight operation was necessary, but Mr. Bingham is now on the way to recovery.

OBITUARY

William J. Pope, one of the pioneer grain merchants of Chicago, died at the home of his daughter in Winnetka, Ill., Nov. 20.

Lewis A. Mattice, grain agent for the Lackawanna Railroad, died in Buffalo, N. Y., Nov. 18, at the age of 60 years. His widow and one son survive him.

Col. Sheldon C. Reynolds, an early grain dealer in Toledo, Ohio, died at his home in that city, Nov. 22, of chronic organic trouble which superinduced pneumonia.

William H. Morehouse, a pioneer grain man, died at his home in Toledo, Ohio, Nov. 21, after an illness of about two months. A sketch of his life and career is given elsewhere in this issue.

Willis Schouton, who was connected with the Henry Harrison Grain Co., died at his home in the Larkin Hotel in Brockport, N. Y., on Nov. 20, following an illness of two months. He leaves one sister.

Samuel C. Woolman, head of the grain firm of S. C. Woolman & Co., died at his home in Riverton, N. J., Nov. 18, after an illness extending over three years. An account of his life is given elsewhere in this issue.

John Yale Mills of the grain commission firm of Mills Bros. of Peoria, Ill., recently passed away after a lingering illness of over a year's duration. Mr. Mills was seventy years of age and had been a member of the Exchange for thirty years, having retired from an active business life three years ago.

Paul O. Rychman, cashier of the New York Produce Exchange, where he had been employed continuously since 1866, died Nov. 30, at his home in Newark, N. J. He was the oldest man in point of service in the Produce Exchange. His illness began about a year ago with an attack of nervous disorder. He was 67 years of age.

William M. Hereley, president of the William Hereley Co., grain dealers, recently died at his home in Chicago. Mr. Hereley was 65 years of age and came to Chicago from New York in 1871, just after the fire, when he started in the grain business. He was a member of the Knights of Columbus and the Royal Arcanum. He is survived by one son.

John Studebaker, senior member of the firm of John Studebaker & Sons of Bluffton, Ind., died Nov. 18 at the age of 95 years. The firm operates a line of country elevators in Indiana and along the line of the Clover Leaf Railroad. Mr. Studebaker was a pioneer dealer in grain in that section of Indiana, having been in the business continuously for sixty years.

B. Abner Betts, grain dealer, died at his home in Chewsville, Md., Nov. 25, following a brief illness of heart trouble, aged 60 years. Mr. Betts was widely known throughout the state. In 1888 he was elected county commissioner and in 1897 he was elected to the legislature. He was elected to the State Senate in 1899 and re-elected in 1903. He is survived by his wife and two children.

John W. Plunkett, manager of the Plunkett Grain and Commission Co. of Wichita, Kan., suddenly died at his home in that city recently. Mr. Plunkett was 27 years of age and before going to Wichita he had been engaged in the grain business in Fort Worth, Texas, and in Oklahoma City, Okla. He established the office in Wichita in 1911. His wife, his father and two brothers survive him.

J. D. Frazier, grain merchant, died recently at his home in Atlanta, Ga., within three hours after he was taken ill. He had been in failing health for several months but had worked at his office until the day previous to his death. He was 64 years of age. He was a leading Mason, a Knight Templar and a deacon in the Baptist Church. He is survived by his wife, two daughters and four sons.

Charles Schneider, manager of the Equity Elevator and Trading Co. at Breckenridge, Minn., died at his home in that place recently after two weeks' illness from pneumonia. Mr. Schneider was born in Wahpeton, N. D., on Feb. 12, 1882. In 1909 he took charge of an elevator in Everdell, Minn., and went to Breckenridge about three months ago. His wife, his mother, five children, two brothers and one sister survive him.

Thomas H. Simonton, frontiersman and pioneer grain dealer, died at his home in Denver, Colo., on Nov. 25, after a brief illness from hardening of the arteries. Mr. Simonton was 85 years of age. He was president of the Society of Colorado Pioneers, and had taken a prominent place in the early history of the State. He traveled overland with ox teams from St. Joseph, Mo., to California in 1850 during the gold excitement. Two years later he returned to his home in Fort Wayne, Ind., and remained there until 1859, when he went to Colorado, where he settled. In 1869 Mr. Simonton established a transfer and grain business in Denver and at the same time he conducted a freighting business between Georgetown and Empire, which were booming mining camps. Later he started a transfer and

grain business in Leadville, Colo. In 1900 he went to Santa Monica, Cal., and did not return to Denver until three years ago. His wife, two sons and one daughter survive him.

George E. Wade, a member of the firm of John Wade & Sons, grain dealers, died at his home in Memphis, Tenn., following a short illness. He was 29 years of age. A wife, four brothers and one sister survive him.

Thomas Hoskins, grain buyer for the Diffenderfer Elevator in Lawndale, Ill., recently died at the Deaconess Hospital in Lincoln, Ill., following an attack of apoplexy. Mr. Hoskins was ill less than a day. He was reared in Lincoln and for many years was engaged with his father in the Hoskins Elevator and later conducted a feed store. His father passed away last July. His mother, one sister and one brother survive him.

William Gardner Gates, 83 years old, died at his home in St. Paul on Nov. 30, following a shock occasioned by a fall received several weeks previous to his death. Mr. Gates had been a resident of St. Paul for more than fifty years. He had assisted in the establishment of the "Union," one of the pioneer newspapers of St. Paul, and when the "Union" was merged with another paper he retired from journalism and engaged in the grain business.

Charles S. Morton, formerly an operator on the Chicago Board of Trade, died at the home of his daughter, Mrs. Duke Hill, in Oak Park, Ill., Nov. 17, at the age of 59 years. Mr. Morton was for many years National Secretary of the Florence Crittenton Mission in Washington, D. C. About twenty years ago he operated on the Board of Trade but he left this work for an evangelistic career and became well known on the Pacific Coast, as well as in the East.

John C. Keller, a prominent grain dealer of Toledo, Ohio, suddenly died at his home in that city following an attack of heart trouble. Mr. Keller was born in Toledo in 1858 and had been connected with the firm of C. A. King & Co. for more than forty years. He was a well-known member of the Toledo Commerce Club and vice-president of the Citizens' Safe Deposit and Trust Co. He is survived by his wife, three daughters, his mother and two sisters.

F. W. Edwards, a prominent grain and commission merchant, died at Henrotin Hospital in Chicago, Nov. 24, following a three months' illness from Bright's disease. Mr. Edwards was born in Ashtabula, Ohio, on Oct. 6, 1866. He came to Chicago in 1893 and established the firm of Edwards & Loomis, hay and grain dealers. He was president of the Illinois Club, a member of the Chicago Athletic Club, and a leading Mason. He is survived by his widow.

W. E. Belcher, C. P. R. traveling grain inspector, was found dead in his bed at Weyburn, Sask., recently. Mr. Belcher was born in Sydenham, Ont., 61 years ago. In 1880 he went to Portage la Prairie as agent for the C. P. R. and two years later was appointed live stock agent for the same company for Montana. He occupied this position until 1886, when he accepted the position of local freight agent for the C. P. R. in Winnipeg. The deceased leaves a widow, four sons and three daughters.

THE IDEAL EAR OF CORN.

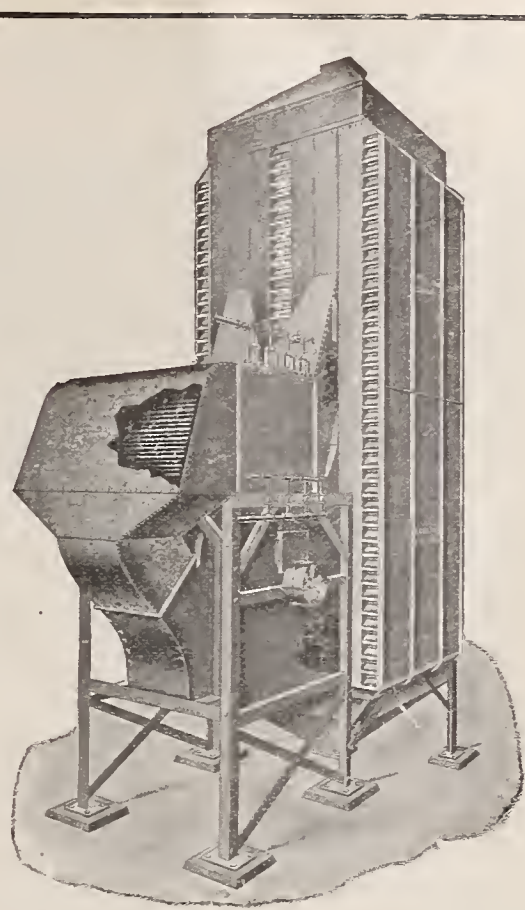
The Indiana Corn Growers' Association has stipulated the requirements for an ideal ear of corn as follows:

A perfect ear of corn should be cylindrical in shape, or nearly so. The circumference of the ear should be about three-fourths of its length. The rows should be straight and not less than sixteen or more than twenty-two in number. The kernel should be well formed about five-sixteenths of an inch wide by five-eighths of an inch long, uniform in size and shape, and six to the inch in the row.

The ears of corn exhibited at the State Corn Show January 13-18, 1913, at Purdue, that most nearly fill the above requirements will be awarded the sweepstakes premiums. "It is sometimes easy," says Prof. Christie, "to find one good ear, but when a man comes to select ten ears that are exactly alike in type, length, shape and color, he has no easy task."

SMUGGLING WHEAT.

A Minneapolis paper, on the strength of rumors from Canada, says that more than a million bushels of good wheat have been sent across the border from Port Arthur, billed as screenings, worth \$6 a ton and dutiable at 10 per cent ad valorem. The story has bad ear marks, however, as it is explained that: "The grain did not come to Minneapolis," said Geo. E. Foulkes, U. S. Agent at Minneapolis. "A Minneapolis firm was under investigation because, it is said, two of its employees, who have long left its employ and are now in business in Canada, were under suspicion there. There is no Minneapolis firm in any way connected with the importations, it is said." The Canadian authorities deny there has been any irregularity, as claimed.



The Hess Ideal Drier and Cooler for Country Elevators, Mills, etc.

Capacity 800 to 1200 bushels per 10 hours
Price \$900.00 f. o. b. Chicago

More grain is dried in

Hess Driers

than in all other makes combined.

Why?

Because grain men prefer them to others and because of a lot of other reasons outlined in our booklet, which is yours for the asking.

We make nine regular sizes, suitable for all requirements, from that of a small elevator up to the big export elevators of the seaboard.

HESS (U. S.) Moisture TESTERS

are suitable for use with gasoline, gas, alcohol or electricity. They are guaranteed for accuracy.

They are better built than any tester and more convenient in operation, besides being economical in the cost of repairs. (Copper flasks, not glass.) Send for booklet on testing grain.

Hess Warming & Ventilating Co.

910 Tacoma Bldg., CHICAGO

[For the Indiana Grain Dealers.]

REASONS FOR CLEANING GRAINBY F. W. HARRISON,
Chief Grain Inspector, Detroit.

The sufficiency of grades of grain in all markets rests primarily with the farmer and country grain dealer. Just so long as grain is bought from the farmer at certain prices each day, in accordance with the condition of the market, irrespective of its quality or condition, and shipped in the same condition as received, just so long will there be dissatisfaction with the results obtained at the terminal markets. On the other hand, if the grain were thoroughly cleaned at the point of origin and the dirt eliminated, there would result greater accuracy in grading and satisfaction to all concerned. It is a fact, well known to every one at all conversant with the handling of grain, that with every handling there is an increase of the dirt content. When the grain reaches its final destination, the dirt must be eliminated; it becomes a waste product and a total loss. Often it becomes necessary to clean the grain at some intermediate point, as I have been compelled to do on many occasions this season (1911), to prevent the corn from becoming sour or musty and to benefit the shipper to the extent of one or two grades on the shipment. The cleaning has shown a dirt content of 800 lbs. to 2400 lbs. on different cars. Think what an immense sum of money in the aggregate is paid to the railroads each year for the transportation of dirt that eventually becomes a total loss. Again, an excessive amount of dirt means the loss of one or more grades at the terminal market, and a consequent discount for the off-grades. I sincerely hope that the bidding for flat grades, recently inaugurated by the Chicago Board of Trade, will become universal in all markets of the United States. I am sure it would prove a strong incentive to the proper conditioning of grain before shipment.

Then again, the dirt content in corn during the germinating period is the direct cause of loss to grain in transit and in store. At that season, when the moisture content is but little above the normal, when corn is found to be musty or in a heating condition on arrival, this condition is invariably found to have originated in that portion of the grain where there was an accumulation of dirt, which prevented a proper circulation of air through the grain.

Another very pernicious habit of the farmer is that of threshing his small grain from the shock and hauling it to the market before it has been through the sweat provided by nature for its proper curing. The shipper sends the grain forward to the terminal market, it being apparently in good condition at time of shipment. The grain in many cases gets into the sweat while en route, and arrives at its destination in a more or less damaged condition, depending upon the time required to reach its destination. This means a loss that could have been saved at the point of origin.

Efficiency at the terminal market requires also uniformity, integrity and stability; they are interdependent. The chief inspector at the terminal market should be a man of long and varied experience, who has made inspection a life study. After an experience of forty-four years in handling grain, I am convinced that the most expert judges of grain are those who have had a thorough elevator experience, the reason being that one gains a knowledge of grain conditions and of the various changes incident to storage of grain, that cannot be obtained elsewhere. Inspectors should be eminently fair and impartial at all times, of good judgment, and have the courage of their convictions. They should be energetic, ambitious, and close students at all times. The types and conditions of the various grains are changing each year, the result of climatic conditions and from other causes; consequently, it requires constant study and close application to keep in touch with prevailing conditions. The chief inspector, if he be competent, should be let alone. I am utterly opposed to appeals or grain committees—call them what you will; often they are a farce. In many cases the members have had little experience and at best are not competent to pass upon the work of the inspector who, from the nature of his employment, is in closest touch with prevailing conditions at all times. In the case of the market which I represent, the grain committee has virtually become obsolete in so far as passing on appeals from the inspector is concerned. The conditions in the Detroit market seem to be satisfactory, as I have no complaints from shippers, and the total business for 1911 increased about 3,000,000 bushels over the previous year.

In closing, I wish to say a few words regarding the moisture test for corn. I consider it a great assistance in the grading of corn. In my opinion, it has human judgment "beaten to a frazzle." In the hands of a careful operator, who is exact in his weights and measurements, it will come very near telling the truth, every time. With the many years' experience that I have had in handling and grading corn, I find that the machine has reversed my judgment very often. In one case, then, Uncle Sam has made good.

Just one word more: Give the terminal market clean, dry grain; examine your shipments carefully to see that they are right; know yourself whether your shipments are bin-burnt, musty, sour or smutty,—you will then have no occasion to down the inspector and I am sure he will make good, and convince you of his efficiency.

WAGES OF FARM LABOR.

The wages of farm labor is the subject of a bulletin recently issued by the United States Department of Agriculture, prepared by direction of Secretary Wilson by George K. Holmes, Chief of the Division of Production and Distribution. It contains the details of the latest of a series of nineteen investigations covering a period of 44 years and a summary of the preceding investigations is included in the bulletin.

In contracts of hiring by the year, with board, the wage rates of men per month increased from \$10.09 in 1866 to \$18.05 in 1909, or a gain of 78.9 per cent. The gain from 1890 to 1909 was 35.8 per cent.

In contracts of hiring by the season, with board, the wage rates of men per month increased from \$12.69 in 1866 to \$20.80 in 1909, or 63.9 per cent.

The wage rates of men per day, with board, for day labor, were ascertained throughout the period, and were found to have increased from \$1.04 for harvest work in 1866 to \$1.43 in 1909, or 37.5 per cent. From 1890 to 1909 the increase was 32.4 per cent and from 1899 to 1909, 30.0 per cent. For labor other than harvest, with board, the wage rates of men per day increased from 64 cents in 1866 to \$1.03 in 1909, or 60.9 per cent. The percentage of increase from 1890 to 1909 was 43.1 and from 1909 it was 37.3.

Among the geographic divisions of States in 1909 the highest rate of wages per month in hiring by the year, with board, is found in the Western group, where the average was \$31.30. Next in order was the North Central division with \$22.22; third in order was the North Atlantic division with \$20.73; the South Atlantic States had an average of \$14.25; and lowest of all was the average of the South Atlantic States, \$13.10.

Rates of wages do not express the real wages received by the farm laborer in this country. Apart from the changes in the purchasing power of money wages, there are various extras that supplement wage rates. In this investigation an attempt was made to get information with regard to the value of supplementary allowances. It appears that the average monthly value of the dwelling, garden and other appurtenances, the use of which was a part of the real wages paid, without board, in 1909, ranged from \$1.75 to \$5, throughout the United States, and the amount when wages were paid, with board, ranged from \$1 to \$4.50. The average value of feed for cow, horse, swine, or poultry, per month, ranged from \$1.11 to \$3.11; the value of pasturage for cow, horse, or swine ranged from 65 cents to \$1.61; the value of fire wood for family use, and the team to haul it, ranged from \$1.06 to \$2.39; the occasional use of team for hauling was valued at 48 cents to \$1.70, and the occasional use of horse and buggy, probably reaching as high a frequency as weekly use, range from 87 cents to \$2.37. The estimated value of the fruit given to the family of the laborers was reported to be worth from 80 cents to \$1.64 per month; the value of the stabling for the laborer's horse, if he had one, was estimated to be 45 cents to \$2 per month; and the laundry service for the laborer was estimated to range from 75 cents to \$2 a month.

The increase in the purchasing power in the wage rates of farm laborers as compared with that of workmen was ascertained by the Bureau of Labor. The purchasing power of wages, in terms of retail prices of food from 1890 to 1898, is regarded as being 100. For the period 1899 to 1907, the purchasing power in the case of workmen increased only to 101.4, but in the case of farm laborers, the purchasing power of wages per month in hiring by the year and season increased to 110.1; the purchasing power of day rates of wages for harvest work increased to 111.5 and of day rates for other than harvest work to 115.2. Notwithstanding the increase of retail prices of food, the rates of wages of farm labor have increased in degrees sufficient to make as a new result a substantial rate of increase.

The wages of women for domestic labor on farms receives attention. This subject was first investigated in 1902. In hiring by the season, the wage rates of the domestic labor of women on the farm are higher than in hiring by the year. The monthly rate by the season was \$9.71 in 1902; \$11.95 in 1906; and \$12.02 in 1909. The Western division of States has an average rate far above the average for the United States in 1909, namely, \$21.55; the rates for the North Atlantic and North Central divisions are a little above the national average, while in the South Central division the average is \$9.92; and in the South Atlantic division, \$8.25. The foregoing rates are with board. When the do-

mestic labor of women was employed by the day, the day rate of wages was 62 cents in 1902; 76 cents in 1906; and 77 cents in 1909.

The report declares that in farm household matters the situation is acute with regard to the supply of hired labor. Country girls as well as city girls seem to regard household labor for hire as undesirable. Joined with this fact is the other one, that the women of the farmer's family are neither able or willing to repeat the manual labor performances of their grandmothers on the farm. Besides this, the farmer's standard of living has risen, certainly on the medium and better sorts of farms in the North and West; and in a perceptible degree the women of the farmer's family have engaged in social functions which are beginning to be incompatible with the performances of household labor without the aid of a servant. The social obligations undertaken by them are for the grange, the women's clubs, the Maccabees, the Woman's Christian Temperance Union, the local church, the farmers' clubs, and this list might be much extended.

The old-time domestic industries are all but forgotten. The women of the farm make no more soap, candles, lye, and so on, with a long list of domestic products of former days; it is rare that one of the younger of the women knows how even to knit. Throughout large areas the pride of the housewife in great store of preserves, dried and pickled fruits, berries, and vegetables exists chiefly in history, and dependence is placed mostly upon the local store for the products of the cannery and the evaporator.

It is protested that the frequently published statement that farm life has made the women of the farm especially prone to insanity is a calumny. There is no statistical authority for the assertion, and the author of this bulletin has endeavored for nearly a score of years to discover the originator of the fabrication, with indications that the irresponsible author was for many years a popular writer on domestic subjects.

SWISS GRAIN IMPORTS.

The Swiss in 1911 imported \$21,156,055 worth of wheat, \$6,397,564 of oats, \$3,327,127 of corn, \$891,660 of barley, \$586,141 of rice, and \$573,403 of rice. The U. S. sent \$1,576,231 of wheat and \$19,300 of corn. Russia sold more than half the wheat, Germany about one-third of the oats, and Argentine more than half the corn. The food imports are increasing, but Black Sea ports are the chief sources of supply. Vice Consul General McBride at Zurich says:

The present Balkan War will have considerable effect upon the Swiss grain movement for 1912. These disturbances have suddenly interrupted the means of transportation between south Russia, the Balkan states, Turkey, and the northern European countries. Switzerland's supply of wheat and other grains, which has been imported from these countries by rail through Sofia, Belgrade, etc., and by the water route from the Black Sea to Genoa, has been temporarily cut off. The importers will now have to look to other sources of production; and this offers a good opportunity for American dealers to increase their exports to this portion of Europe.

One Zurich dealer has already ordered two full cargoes of wheat from the United States to meet the emergency, and it is expected that many other firms will order from America before the Balkan trouble is settled and transportation facilities with the Near East are reopened. Another factor favorable to increased purchases of American wheat is the tremendous crop of the present year in the United States and the correspondingly low prices.

American and Canadian wheat has always been popular on the Swiss market, where its superior quality is fully recognized. The Russian and Balkan wheat is usually somewhat cheaper; hence its large sale, notwithstanding the poorer quality.

Present (November 12) quotations are as follows: Manitoba No. 1, \$4.84; No. 2, \$4.76; No. 3, \$4.68; Kansas wheat, \$4.82; Russian, \$4.98; and Roumanian, \$5.11. The high price of the European wheat is caused by the present war. Prices are quoted "franco" Zurich, per 100 kilos (220.46 pounds).

A list of the principal grain importers in Zurich may be obtained from the Bureau of Foreign and Domestic Commerce.

E. L. Morris has been gathering samples of Kansas corn for the use of the Department of Agriculture's grain standardization work.

William Hardy of Boston, head of a large distributing grain firm, recently visited the Chicago Board of Trade and was a guest of Z. P. Brosseau.

The roof of the grain bin that is under construction for the elevator company at Burley, Idaho, collapsed on November 28, carrying with it one of the workmen, who fell 70 feet, and suffered several broken bones and other injuries. He was sent to the hospital at Twin Falls, where he is recovering. A large piece of the wall fell and struck a 10-year-old boy who was playing near the building in such a way that one side of his head was crushed and his leg was broken in two places. He died two days later without regaining consciousness.

LATE PATENTS

Issued on November 12, 1912.

Seed Testing Device.—Morley P. Reynolds, Cleveland, Ohio. Filed April 20, 1912. No. 1,044,247.

Weighing Machine.—John P. Clifford and Stanley G. Murray, Passaic, N. J., assignors to Richardson Scale Company, Athenia, N. J. Filed Jan. 12, 1912. No. 1,044,353.

Issued on November 19, 1912.

Carrier or Conveyor.—William Kelsey Liggett, Columbus, Ohio, assignor, by mesne assignments, to the Jeffrey Manufacturing Company, Columbus, Ohio. Filed Nov. 29, 1905. No. 1,044,547. See cut.

Issued on November 26, 1912.

Grain Door for Box Cars.—Jacob S. Bender, Kansas City, Mo., assignor to David W. Rider, Kansas City, Mo. Filed Jan. 16, 1911. No. 1,045,249.

Grain Door.—Wiley Gradick, Sr., Tyler, Texas, assignor of one-half to Woldert Grocery Company, Tyler, Texas. Filed May 23, 1912. No. 1,045,278.

Silo Elevator.—Christopher J. Lawless, Lincoln, Neb. Filed Jan. 11, 1912. No. 1,045,301. See cut.

Grain Car Door.—Joseph Morris and Charles Brownlee, Keewatin, Ont., Canada. Filed May 10, 1912. No. 1,045,313.

Seed Corn Drier.—Lucien W. Huoff, Galesburg, Ill. Filed Jan. 18, 1911. No. 1,045,407. See cut.

Device for Screening Seed.—George W. Pryor,

bean oil in Dairen. Another important factor which might tend to favor the latter course is that thousands of tin cans in which the local oil is packed for export are manufactured in Japan.

The government elevator at Port Colborne during last week of November made an unloading record, taking 333,000 bushels of wheat out of the steamer Emperor in 11½ hours.

October inspections of wheat at Winnipeg showed a much higher quality than in 1911, there having been 16,900 cars grading 2 Northern and better, against 9,866 cars in 1911.

For Sale

[Copy for notices under this head should reach us by the 12th of the month to insure insertion in the issue for that month.]

SECOND-HAND GRAIN BAGS.

For sale, 5,000 second-hand grain bags; any quantity. For prices write FOELL & CO., 123 Market street, St. Louis, Mo.

ELEVATORS AND MILLS

ELEVATOR FOR SALE.

Located on M., K. & T. and St. L. & Mo. S. Ry's. New plant throughout. Large country to draw from. For further particulars address T. F. JAMESON, 1407 Spruce St., Coffeyville, Kan.

FINE TERMINAL PLANT FOR SALE.

Grain Elevator property for sale at Harvey, Ill., on Grand Trunk Railroad. Description: 10 fire-proof storage tanks, capacity 250,000 bushels; bleaching tower; boiler house and boiler; office; motors; machinery; electric switches; concrete foundation for working house, etc. Direct and belt connections with all railroads. Address H. W. ROGERS & BRO., Western Union Bldg., Chicago, Ill.

MACHINERY

NEW ENGINES FOR QUICK SHIPMENT.

Steam, oil, high-speed Corliss; electric sets, 5 to 200 k.w; high grade; full line in stock. A. M. MORSE, manager, 72 W. Adams St., Chicago, Ill.

FOR SALE.

One 25-horsepower, Otto Gasoline Engine, in good running order. Price, with battery ignition, \$350; magneto ignition, \$375. THOMPSON & SONS MFG. CO., Beloit, Wis.

FOR SALE.

One Monitor Dustless Receiving Separator; nearly new; in first-class order.

One Fairbanks Dormant Warehouse Scale; double brass beam and double iron pillars; capacity 3,000 pounds; in first-class order.

Write for prices and full description. JOHNSON & COMPANY, Goshen, Ind.

99

For twenty-five years 99 Board of Trade has led as headquarters for latest grain news and descriptive literature covering world's crops. Wagner Letter, Wagner Crop Booklet, "Grain Investments" sent on request. Write to 99.

E. W. WAGNER & CO., 99 Board of Trade, CHICAGO

Edward P. McKenna

John A. Rodgers

McKENNA & RODGERS COMMISSION MERCHANTS

Grain and Provisions, Shippers of Corn and Oats

61 Board of Trade, CHICAGO

Consignments given
Special Attention

Phone
Harrison 7228

Orders in Futures
carefully executed

HELP WANTED

WANTED.

Experienced mill and factory supply man, who is good salesman, to look after principally city trade and assist manager with correspondence. Prefer man understanding power transmission, elevating and conveying machinery, also steam power plants in all details and gas engines and all kinds of steam, mill and factory supplies. State age, experience and references. GREAT WESTERN MFG. CO., Kansas City, Mo.

Grain and Seeds

OATS STRAW WANTED.

Wanted, 100 cars oats straw. C. T. HAMILTON, New Castle, Pa.

WANTED FIELD SEEDS.

All varieties. Quote with samples. J. OLIVER JOHNSON, Chicago, Ill.

FOR SALE.

Alfalfa seeds, highest grades; also red clover and timothy seeds. Write us. C. A. SMURTHWAITE GRAIN & MILLING COMPANY, Salt Lake City, Utah.

FLOUR AND MILL FEEDS.

Mixed cars of flour and mill feeds in 100-pound sacks are our specialties. Would like to send you a trial order to convince you of the superiority of our products. ANSTED & BURK CO., Springfield, Ohio.

CHOLERA PROOF HOGS.

I have more than 5,700 swine on my farm and am selling grade Yorkshire, Tamworth, Poland-China and Duroc brood sows, boars and shoats in any quantity at best Buffalo market price for fat Yorkers on day of sale. Sows to farrow soon included. These hogs are not fat, are cholera proof and prolific breeders. Pigs that are six to ten weeks old at \$3 to \$4. ALVAH BROWN'S PIG FARM, Grand Rapids, Mich.

WANTED Mixed Alsike and Timothy

Carlots or less. Will pay you more than you can get elsewhere. Send samples today. Also want Timothy, Red Clover and Alsike, etc.

THE ADAMS SEED COMPANY
DECORAH, IOWA

SEEDS WANTED

We solicit correspondence from shippers or dealers who are in position to offer us, or can secure for us, Timothy, Red, Alsike or Alfalfa Clover, Millet, Red Top, or other Field Seeds. Write us, with crop news, samples, and other information as to production of seed and approximate values in your section. Please refer to this advertisement.

ILLINOIS SEED CO.

1521-1535 Johnson St.

CHICAGO, ILL.

LATE PATENTS

Issued on November 12, 1912.

Seed Testing Device.—Morley P. Reynolds, Cleveland, Ohio. Filed April 20, 1912. No. 1,044,247.

Weighing Machine.—John P. Clifford and Stanley G. Murray, Passaic, N. J., assignors to Richardson Scale Company, Athenia, N. J. Filed Jan. 12, 1912. No. 1,044,353.

Issued on November 19, 1912.

Carrier or Conveyor.—William Kelsey Liggett, Columbus, Ohio, assignor, by mesne assignments, to the Jeffrey Manufacturing Company, Columbus, Ohio. Filed Nov. 29, 1905. No. 1,044,547. See cut.

Issued on November 26, 1912.

Grain Door for Box Cars.—Jacob S. Bender, Kansas City, Mo., assignor to David W. Rider, Kansas City, Mo. Filed Jan. 16, 1911. No. 1,045,249.

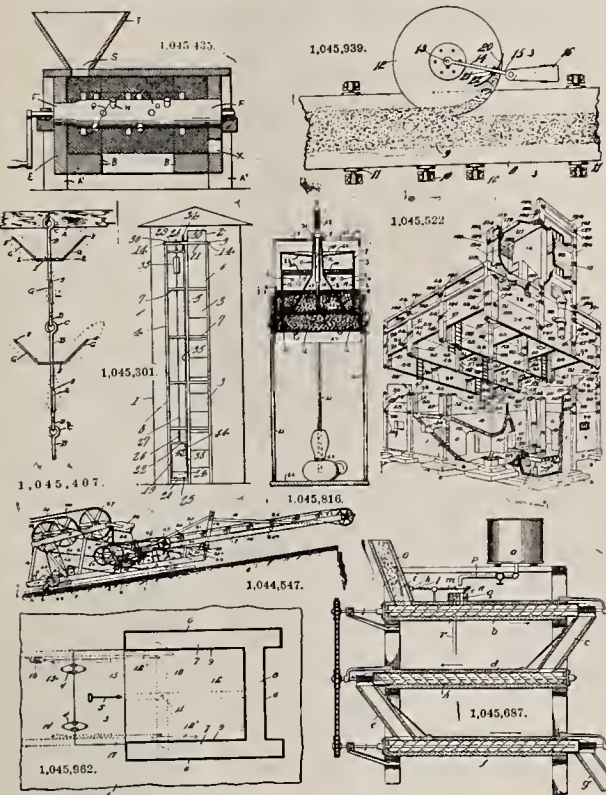
Grain Door.—Wiley Gradick, Sr., Tyler, Texas, assignor of one-half to Woldert Grocery Company, Tyler, Texas. Filed May 23, 1912. No. 1,045,278.

Silo Elevator.—Christopher J. Lawless, Lincoln, Neb. Filed Jan. 11, 1912. No. 1,045,301. See cut.

Grain Car Door.—Joseph Morris and Charles Brownlee, Keewatin, Ont., Canada. Filed May 10, 1912. No. 1,045,313.

Seed Corn Drier.—Lucien W. Huoff, Galesburg, Ill. Filed Jan. 18, 1911. No. 1,045,407. See cut.

Device for Screening Seed.—George W. Pryor,



Greenville, Ga. Filed July 18, 1911. No. 1,045,435. See cut.

Elevator and Tank Construction.—John E. Conzelman, St. Louis, Mo., assignor to Unit Construction Company, St. Louis, Mo. Filed Oct. 11, 1911. No. 1,045,522. See cut.

Grain Scourer.—Dawson Winfield Durrett, Clarks-ville, Tenn. Filed March 11, 1912. No. 1,045,687. See cut.

Issued on December 3, 1912.

Seed Germination Testing Device.—Harry G. Coy, Waterloo, Neb. Filed Feb. 19, 1912. No. 1,045,816. See cut.

Unloader for Conveyors.—Anton Brotz, Sheboygan, Wis., assignor to J. M. Kohler Sons Company. Filed May 24, 1911. No. 1,045,939. See cut.

Self-Locking Grain Dump.—Claus H. Ficken and Louis E. Tanner, Anchor, Ill. Filed March 23, 1912. No. 1,045,962. See cut.

Corn Bin.—Thomas Forstner, New Ulm, Minn. Filed May 13, 1911. No. 1,045,963.

Seed Corn Stringer.—James L. Harper, Newton, Iowa. Filed Jan. 27, 1910. No. 1,046,183.

BEAN-OIL INDUSTRY AT DAIREN.

The bean-oil industry at Dairen, says Consul Pontius at Dalny, has greatly developed during recent years. Local mills have over \$1,300,000 invested, \$800,000 by Japanese merchants, the balance by Chinese firms. During the ordinary season the mills turn out 60,000 pieces of bean cake daily, this amount increasing to 90,000 in the rush period. The outlook would seem to be good, notwithstanding the recent activity shown in the export of beans from Vladivostok to Europe. The fact that Manchurian beans can be purchased cheaper at Vladivostok (10 cents per picul of 133 1-3 pounds) than at Dairen has already suggested to the Japanese importer the advisability of erecting bean-oil mill at home, instead of, as is now done, purchasing most of the

GRAIN RECEIVER

PHILADELPHIA

L. F. MILLER & SONS,
Receivers and Shippers of
GRAIN, FEED, SEEDS, HAY, ETC.
OFFICE: 2931 N. BROAD ST., PHILADELPHIA, PA
CONSIGNMENTS SOLICITED. Special attention given to
the handling of CORN AND OATS.
REFERENCES: { Manufacturers' National Bank, Philadelphia, Pa.
Union National Bank, Westminster, Md.

E. E. DELP GRAIN CO.
GRAIN AND FEEDS
453 BOURSE PHILADELPHIA, PA
ELEVATOR, TRANSFER HOUSE AND MILLS:
BOURBON, INDIANA

MILWAUKEE

O. MOHR, Mgr. G. C. HOLSTEIN, Sec'y-Treas.
Mohr-Holstein Commission Co.
29 Chamber of Commerce
MILWAUKEE
Sample Grain a Specialty
BRANCH OFFICES AT CHICAGO AND MINNEAPOLIS

OUR SPECIALTIES:
Malting Barley
Milling and Distilling Rye
FAGG & TAYLOR, Shippers
MILWAUKEE, WIS.

KANSAS CITY

R. J. THRESHER, Pres. L. A. FULLER, Sec'y
THRESHER-FULLER GRAIN CO.
Grain Commission Merchants
CONSIGNMENTS SOLICITED
Grain Bought and Sold for Future Delivery
311-14 Board of Trade KANSAS CITY, Mo.

ROOFING AND SIDING

SYKES STEEL ROOFING CO.
114 W. 19th Place, Chicago

MAKERS OF FIREPROOF WINDOWS

WE manufacture all gauges of corrugated iron, either painted or galvanized. We make Patent Cap Roofing, Roll Cap roofing, "V" Crimped Roofing, Metal Ceilings, etc., etc.

We make a specialty of

**Corrugated Iron and
Metal Roofing
For Grain Elevators**

And take contracts either for material alone or job completed
Write us for prices. We can save you money.

PEORIA

P. B. & C. C. MILES
Established 1875 Incorporated 1910
PEORIA, ILL.
Handling Grain on Commission
Our Specialty

A. G. TYNG, Jr. D. D. HALL
TYNG, HALL & CO.
Grain and Commission
Merchants
Rooms 33 and 35 Chamber of Commerce
PEORIA, ILLINOIS

C. W. Buckley. Thos. J. Pursley
Buckley, Pursley & Co.
COMMISSION MERCHANTS
GRAIN, HAY AND SEEDS
PEORIA, ILL.
References { First National Bank, Peoria, Ill.
Commercial German National Bank, Peoria, Ill.

W. W. Dewey & Sons
GRAIN COMMISSION
26 Chamber of Commerce, PEORIA, ILL.
Prompt personal attention given to
Consignments and orders for grain.

We Get Continuous Chicago Markets. Private Wires to all Points.
T. A. GRIER & CO.
Grain Shipping and Commission Merchants
We Furnish Bids on Grain to Arrive
and Also Solicit Consignments.
18-22 Chamber of Commerce, PEORIA, ILL.

RUMSEY, MOORE & CO.
GRAIN COMMISSION
Board of Trade Bldg. PEORIA, ILL.

LOUIS MUELLER L. L. GRUSS
MUELLER GRAIN CO.
RECEIVERS and SHIPPERS
GRAIN
We Solicit Your Consignments In Grain and Hay
ROOM 39 CHAMBER OF COMMERCE
PEORIA, ILLINOIS

We are here to handle your business right;
either on Consignment or Sales to Arrive.
WARREN COMMISSION CO.
GRAIN
PEORIA - - ILLINOIS
B. E. MILES L. H. MURRAY

INDIANAPOLIS

**The
Bassett Grain Co.**
INDIANAPOLIS
Telephones 80 615-616 Board of Trade

FRANK A. WITT
GRAIN
Strictly Commission and Brokerage
Close attention to the details of all business.
627 Board of Trade, INDIANAPOLIS, IND.
Phone 3630

BALTIMORE

CHAS. ENGLAND & CO.
RECEIVERS OF
GRAIN and HAY
308-310 Chamber of Commerce
BALTIMORE, MD.

ST. LOUIS

**"THE CONSIGNMENT HOUSE
OF ST. LOUIS"**
GRAIN, HAY & GRASS SEEDS
Picker & Beardsley Com. Co.
118 NORTH MAIN STREET.

Ship your Grain, Hay and Seeds to
John Mullally Commission Co.
ST. LOUIS, MO.
WE NEVER BUY—HANDLE ON
CONSIGNMENT ONLY

SEEDS

Grain, Clover and Grass Seeds,
CHAS. E. PRUNTY,
7, 9 and 11 South Main St. SAINT LOUIS

GRAIN RECEIVERS

TOLEDO

When "Seedy"

Try

C. A. KING & CO.

Toledo Leads World

"SEND IT TO ZAHM"

THAT Consignment of Wheat, Oats, Corn or Seed.

THAT Order for Futures—Toledo or Chicago.

TOLEDO is the real market for Red Clover, Alsike and Timothy futures.

J. F. ZAHM & CO.

TOLEDO (Here since 1879) OHIO

ASK FOR OUR DAILY RED LETTER — FREE

JOHN WICKENHISER & CO.

Wholesale Grain Dealers

TOLEDO, OHIO

We make track bids and quote delivered prices.

Solicit consignments of Grain and Clover Seed.

Members Toledo Produce Exchange and Chicago Board of Trade

The Oats Specialists

H. D. RADDATZ & CO.

GRAIN, SEEDS AND FUTURES

Always in the market to buy or sell. Ask for our prices.

Room 21, Produce Exchange
TOLEDO, OHIO

Spring Wheat for Distribution

Look for our quotations on both spring and winter wheat in connection with our market letter on the last page of the Toledo Daily Market Report. If not receiving, ask for it. We want you to have it.

SOUTHWORTH & COMPANY

GRAIN, SEEDS, PROVISIONS

36-37 Produce Exchange, Toledo, Ohio

Oats Are Our Specialty

The Paddock Hodge Co.

Receivers — TOLEDO — Shippers

OMAHA

CAVERS ELEVATOR CO.
OMAHA

Receivers and Shippers of Grain
SACKED CORN AND OATS

Members: Omaha Grain Exchange Chicago Board of Trade.

PITTSBURG

Sizing up Pittsburg Market?

THINK OF

H. G. MORGAN, "The Pittsburg Hay Man"

727-729 Grain Exchange, Pittsburg, Pa.

HAY—Ear Corn, Oats—HAY

IN THE ONE SPOT 45 YEARS

Daniel McCaffrey's Sons Co.

Leading Hay and Grain Dealers

Pittsburg - - - Pennsylvania

D. G. Stewart & Geidel

GRAIN, HAY and FEED

RYE A SPECIALTY

Office 1019 Liberty Street Pittsburg, Pa.

Proprietors Iron City Grain Elevator. Capacity 300,000 bu.

C. M. HARDMAN D. V. HECK

HARDMAN & HECK

Receivers and Shippers of

GRAIN, HAY AND MILL FEED

IN CAR LOADS

Office: 723-725 Wabash Bldg., Pittsburg, Pa.

We buy direct or handle your grain on consignment. Our facilities are unequalled for handling your shipments satisfactorily in the Pittsburg market.

W. F. Heck & Company

RECEIVERS AND SHIPPERS IN CAR LOTS
MIXED CARS OUR SPECIALTY

Grain, Hay, Straw and Mill Feed

Room 727, Wabash Bldg., Pittsburgh, Pa.

Members: National Hay Association and Use Robinson's Code.
Pittsburg Grain and Flour Exchange

CRAWFORDSVILLE, Ind.

Crabbs Reynolds Taylor Company

CLOVER SEED

Car Lot BUYERS of GRAIN

Crawfordsville

Indiana

NEW YORK CITY

L. W. FORBELL & CO.

Commission Merchants

342 Produce Exchange NEW YORK

Try us with consignments of oats and corn.

We are Specialists in these grains and are strictly Commission Merchants.

BROOKLYN HAY & GRAIN CO.

HAY, STRAW AND GRAIN

COMMISSION MERCHANTS

ON ALL MARKETS IN NEW YORK HARBOR

Office: Borough of Brooklyn, New York

DETROIT

A. S. DUMONT R. C. ROBERTS R. L. HUGHES

Dumont, Roberts & Co.

RECEIVERS GRAIN SHIPPERS

Chamber of Commerce
DETROIT, MICH.

Merchants Exchange
DECATUR, ILL.

Consignments Solicited.

Ask for our bids and quotations.

MINNEAPOLIS

J. L. McCaull, President R. A. DINSMORE, Vice President
S. J. McCaull, Secretary A. M. DINSMORE, Treasurer

The McCaull-Dinsmore Co.
COMMISSION MERCHANTS

915-16-17 CHAMBER OF COMMERCE
MINNEAPOLIS, MINN.

DULUTH

MILWAUKEE

OMAHA

LANCASTER

DO YOU REALIZE

That country trade always pays you
best in every way?

We work a large country business.

See the point?

JONAS F. EBY & SON, LANCASTER, PA.

NASHVILLE

R. W. HALE

W. T. HALE, JR.

J. R. HALE & SONS

WHOLESALE DEALERS IN

Grain and Field Seeds

Storage and Consignments Solicited

Nashville, Tenn.

GRAIN RECEIVERS

CHICAGO

ARMOUR GRAIN CO.

GRAIN DEALERS

CONSIGNMENTS SOLICITED. This department is fully equipped in every way to give the very best service in Chicago.

137 S. La Salle St. CHICAGO

CHICAGO

SOMERS, JONES & CO.

(INCORPORATED)

COMMISSION MERCHANTS

GRAIN AND FIELD SEEDS

CHICAGO MILWAUKEE MINNEAPOLIS

We are amply prepared to give the best of service on consignments of cash grain and on orders for future delivery.

Make drafts on us and address all correspondence to us at 82 Board of Trade, CHICAGO

CHICAGO

W. A. FRASER, Pres. W. A. FRASER, Jr., Vice-Pres.
R. W. CARDER, Sec. and Treas.

W. A. FRASER CO. GRAIN COMMISSION

715 Royal Insurance Bldg., CHICAGO, ILL.
ST. LOUIS, MO. PEORIA, ILL.
Tel. Wabash 1252

E. W. BAILEY & CO.

Commission Merchants

GRAIN, SEEDS AND PROVISIONS

72 Board of Trade CHICAGO

J. P. GRIFFIN & COMPANY

Grain Commission

61 BOARD OF TRADE

Long Distance Telephone
Harrison 5693

CHICAGO

EVERYONE HAS A HOBBY
SO HAVE WE

CONSIGNMENTS

THAT'S ALL TRY US

M. L. VEON & CO.

762 INSURANCE EXCHANGE BUILDING, CHICAGO

ADOLPH KEMPNER COMPANY

COMMISSION MERCHANTS

Reliable Crop Information. Prompt and Faithful Service.

50 Board of Trade, CHICAGO

PHILIP H. SCHIFFLIN, Pres. EUGENE SCHIFFLIN, Secy.-Treas.

PHILIP H. SCHIFFLIN & CO.

INCORPORATED

Commission Merchants

515-518 Postal Telegraph Bldg.
CHICAGO, ILLINOIS

Consignments of all kinds of Grain and Field
Seeds a specialty

We Buy

Wheat—Corn—Oats—Barley—Rye

Send Samples

The Quaker Oats Co.

Cereal Millers

Grain Dept. 1600 Railway Exchange
CHICAGO

Hulburt, Warren & Chandler

Stock Brokers and Commission
Merchants, Grain and Provisions.

Business solicited in any department
Receiving, Shipping, Futures

130 S. La Salle St. CHICAGO



Lamson Bros. & Co.

ESTABLISHED 1874

Commission Merchants

AND

Track Buyers of Grain

6 Board of Trade CHICAGO

Ask for Bids Consignments Solicited

WM. SIMONS, Pres. and Mgr. WARREN T. McCRAY, Vice-Pres.



GEO. L. STEBBINS, Sec'y-Treas. E. E. RICE, Representative

POPE & ECKHARDT CO.

Commission Merchants

Grain and Seeds

316-322 Western Union Building

CHICAGO



RUMSEY & COMPANY

COMMISSION MERCHANTS

Consignments a Specialty for Forty Years

80-81 BOARD OF TRADE,

Branch Offices
PEORIA
ST. LOUIS

CHICAGO

I. P. RUMSEY
FRANK M. BUNCH
HENRY A. RUMSEY

J. Herbert Ware Edward F. Leland

CONSIGN

your Grain and Seeds, and send your
orders for

GRAIN, PROVISIONS and STOCKS to

WARE & LELAND

190 W. JACKSON BOULEVARD
Royal Insurance Bldg.
CHICAGO

Long Distance Phones:
Wabash 3262 Automatic 51073
Your Interests Are Our Interests

GRAIN RECEIVERS

CHICAGO

GEO. S. DOLE, Pres. H. N. SAGER, Sec.
J. H. DOLE & CO.
 (Established 1852)

Commission Merchants, Grain and Seeds

We solicit your
CONSIGNMENTS
 and orders in futures

226 La Salle Street, - - CHICAGO

HELLO! HELLO!! HELLO!!!
 ¶ In order to get the best results from a telephone conversation, you have got to have a good connection. Just so in the handling of your business. ¶ Connect with the firm that is a live wire; that will look after your interests; call for re-inspection when necessary; get good prices; make quick returns, and give you liberal treatment. ¶ In other words, make a connection with

ROSENBAUM BROTHERS, 77 Board of Trade, CHICAGO.
 ¶ Send us your grain to be sold on consignment. ¶ Let us bid for it when you desire to sell to arrive. ¶ You'll make no mistake (either Toledo or Chicago). ¶ Let us hear from you.
 PHONE. TELEGRAPH. WRITE.

F. E. WINANS & CO.
 GRAIN AND FIELD SEEDS
 COMMISSION MERCHANTS

Barley, Oats, Wheat, Corn, Rye, Timothy, Clover, Flax, Hungarian Millet

96 BOARD OF TRADE, CHICAGO

Write us freely on all matters pertaining to grain and field seeds. Your questions fully and cheerfully answered; particular attention paid to timothy seed and grain by sample. Consignments and speculative orders receive our careful personal attention.

G. T. CARHART, Pres. L. S. HOYT, Vice Pres. A. N. HARWOOD, Sec.-Treas.

Personal, experienced attention
 given to all consignments to

CARHART, CODE, HARWOOD CO.
 GRAIN COMMISSION MERCHANTS

36 BOARD OF TRADE CHICAGO

C. H. CANBY & CO.
 8 Board of Trade
 CHICAGO

We give special attention to handling the hedges of grain dealers and millers in the future markets. Write us.

RALPH McDERMID

McDERMID & CO.
 Commission Merchants
 Grain and Provisions

333-334 Postal Telegraph Bldg., CHICAGO, ILL.

Personal attention to Consignments and Orders
 for Future Delivery.

Nye & Jenks Grain Co.
 907-913 Postal Telegraph Bldg.,
 Chicago, - Illinois

E. C. BUTZ GRAIN CO.
 Cash Grain Commission
 Barley a Specialty
 601 Gaff Building CHICAGO, ILL.

CHICAGO

H. M. PAYNTER
 GRAIN COMMISSION

Special attention given consignments of grain and seeds. Orders in futures carefully executed

402-408 Western Union Bldg., Chicago

All business transacted through and confirmed by
 H. W. Rogers & Bro.

HENRY H. FREEMAN & CO.

Hay, Straw and Grain
 COMMISSION MERCHANTS

Correspondence and Consignments Solicited.
 Market Reports on Application.

66 Board of Trade CHICAGO, ILL.

B. S. WILSON

HARRY BOORE

B. S. Wilson & Co.
 GRAIN, SEEDS and PROVISIONS

1118-1119 Royal Insurance Bldg., Chicago

W. M. TIMBERLAKE, Manager Grain Department

HOOPER GRAIN COMPANY
 OAT

Shippers

Operate Atlantic and Grand Trunk Western Elevators
 CHICAGO

C. H. THAYER & CO.
 GRAIN, SEEDS, FUTURES
 Your Consignments and Future Orders Solicited

Our untarnished record for more than a quarter of a century, backed up with over \$100,000.00 capital, certainly speaks for itself.

721 Insurance Exchange Bldg., CHICAGO

Minneapolis Milwaukee St. Louis Kansas City

BUFFALO

Alder-Stofer Grain Co.
 CONSIGNMENTS A SPECIALTY
 Buffalo, N. Y.

The permanent success of our business depends on our customers' continued satisfaction. Our business has been established forty years.

L. S. CHURCHILL, President
 G. W. BARTLETT, Treasurer

The Churchill Grain & Seed Co.

Commission Orders Executed. Grain and Seed Bought and Sold

Offices: Buffalo, N. Y. Members
 Toledo, Ohio New York Produce Exchange
 Seed Warehouse: Toledo Produce Exchange
 Located at Toledo, Ohio Buffalo Corn Exchange

A. W. HAROLD
 GRAIN
 BARLEY A SPECIALTY

717 Chamber of Commerce BUFFALO, N. Y.

H. T. BURNS,
 President

BASIL BURNS,
 Sec.-Treas.

Burns Grain Company
 BUFFALO, N. Y.

We invite correspondence and solicit consignments.

GET OUR BIDS AND MARKET REPORTS

L. E. HARMON, Pres. GEO. F. BOOTH, Sec. and Treas.
BUFFALO CEREAL COMPANY
 CEREAL MILLERS

Buyers of White Corn, Yellow Corn
 and White Oats.

BUFFALO, N. Y.

SEEDS

THE ALBERT DICKINSON CO.

DEALERS IN

GRASS SEEDS, CLOVERS, FLAX SEED, LAWN GRASS, BEANS,
 PEAS, POPCORN, BIRD SEEDS, BUCKWHEAT, BAGS, ETC
 CHICAGO, ILL. Branch: Minneapolis, Minn.



MACDONALD ENGINEERING CO.

MONADNOCK BUILDING, CHICAGO

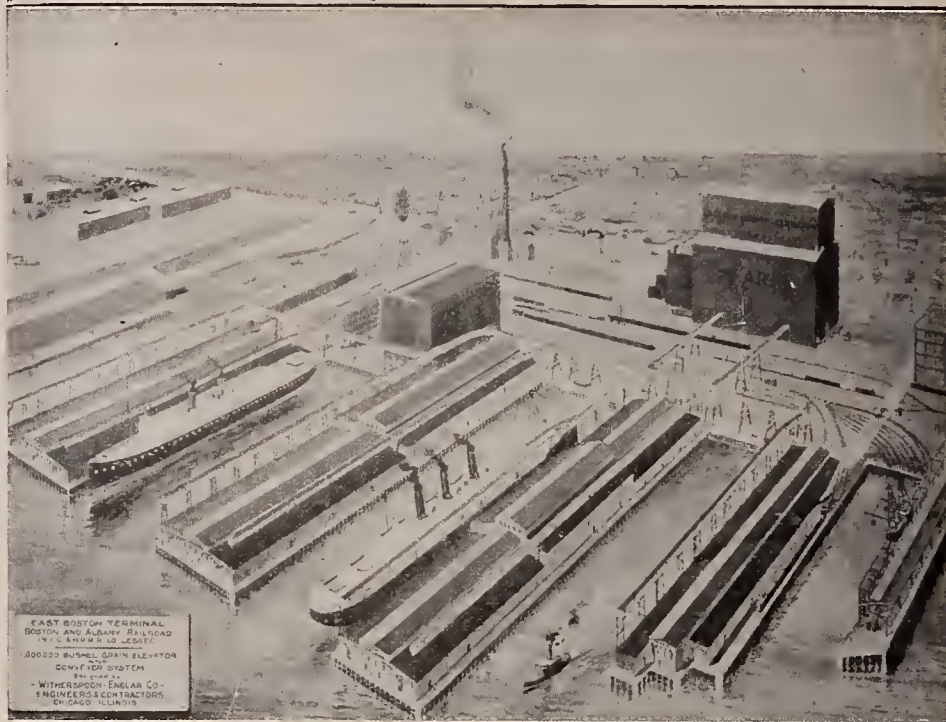


The above cut shows one of our latest models

Fire Proof Concrete Grain Elevator

In this style we build *Transfer Elevators, Terminal Elevators*
or *Elevators at Country Points.* Write us.

Fireproof Grain Elevators



East Boston Terminal, Boston & Albany Railroad,
New York Central & Hudson River Railroad Co., Lessees

Designs and estimates promptly furnished
for all kinds of buildings for the handling
and storage of grain in any locality.

Witherspoon-Englar Company

1244-1250 Monadnock Building, Chicago, Ill.

John S. Metcalf Co.

Builders of

Terminal Elevators

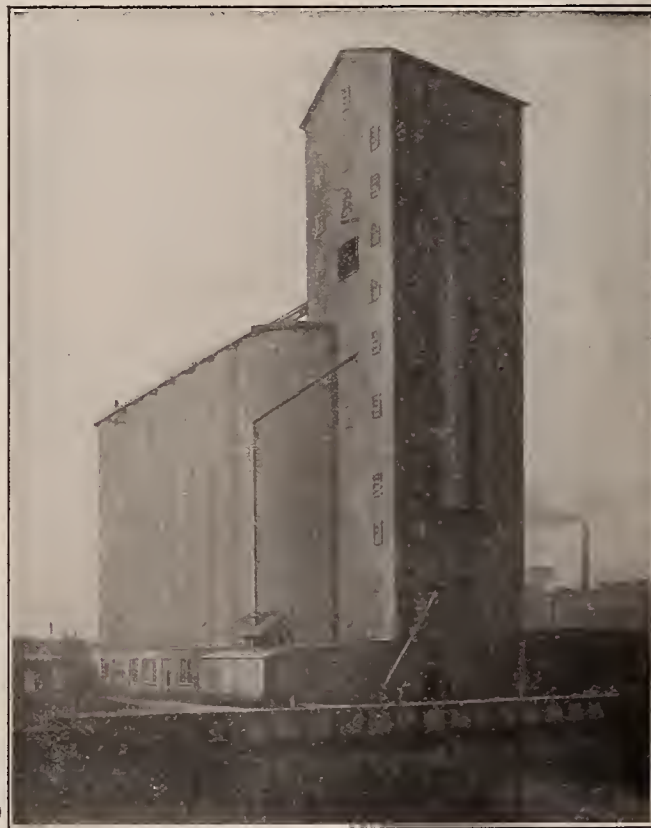
Concrete Storage Bins

Transfer Elevators

Drawings and Specifications

THE TEMPLE, CHICAGO

FIRE-PROOF GRAIN ELEVATORS CONCRETE OR STEEL BINS



WHEELER ELEVATOR, BUFFALO, N. Y.

MONARCH ENGINEERING CO.

Engineers and Contractors
Chamber of Commerce - BUFFALO, N. Y.
WRITE US FOR PRICES

At 10 tion



**Burrell
Engineering
& Construc-
tion Co.**

Designers and
Builders of

**GRAIN
ELEVATORS**

in Wood or
Concrete

Rooms 1001-1004
Chicago Stock Exchange Building
CHICAGO, ILL.

1125 Chamber of Commerce Building,
DETROIT, MICH.

JAMES STEWART & CO.

GRAIN ELEVATOR DEPARTMENT

1811 Fisher Building
W. R. SINKS, Manager

CHICAGO
R. H. FOLWELL, Engineer



Grand Trunk Pacific Railway Co. Elevators at Fort William, Ont.
Capacity 3,500,000 Bushels.

We Build Grain Elevators, Any Type of Construction, in Any Part of the World

Also General Contractors with Offices in the Following Cities,
Wire, Write or Call Personally.

NEW YORK, Hudson Terminal Building
PITTSBURG, PA., Westinghouse Building
SAN FRANCISCO, CAL., 709 Mission Street

ST. LOUIS, MO., Bank of Commerce Building
NEW ORLEANS, LA., Hibernia Bank Building
DENVER, COLO., 1st National Bank Building

CANADIAN STEWART CO., Limited, Montreal, Can., Eastern Townships Bank Building
FORT WILLIAM, Ontario, Canada

Fire Proof Steel Grain Elevators and Storage Tanks



30,000 Bushel Steel Elevator Built for Dakota Grain Co. at Alfred, N. D.

This is a type of elevator that we are building all through the Western States. They are an absolute insurance against fire, and for that reason they are the most economical elevator construction that can be found.

The Minneapolis Steel & Machinery Co. is equipped to furnish both steel and machinery with service, which, for efficiency and promptness is not equalled in this kind of work.

MINNEAPOLIS STEEL & MACHINERY CO.

MINNEAPOLIS, MINN.

Denver, Colo.
El Paso, Tex.

Spokane, Wash.

Salt Lake City, Utah
Butte, Mont.



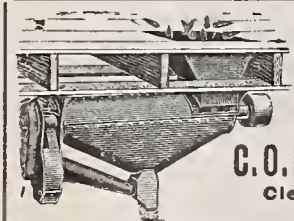
DUST! DUST! GIBBS DUST PROTECTOR is invaluable to operatives in every industry where dust is troublesome. It has been thoroughly tested for many years in every kind of dust, and is the most reliable protector known. Perfect Ventilation. Nickel-plated protector, \$1, postpaid. Circular free.

Agents wanted. GIBBS RESPIRATOR CO., "B" 124 East Ave., Oak Park (Chicago), Ill.

Elwood's Grain Tables.

A book needed by every grain dealer. It shows the value of any number of bushels or pounds of wheat, rye, oats, corn or barley at any given price from 10 cents to \$2.00 per bushel. Cloth bound, 200 pages. Mailed on receipt of price, \$1.25, by

MITCHELL BROTHERS PUBLISHING CO. 431 S. Dearborn St., Chicago



Triumph Power Corn Sheller

C. O. Bartlett & Co.
Cleveland, O.



The Barnett & Record Co.

General Contractors
DESIGNERS AND BUILDERS OF

Grain Elevators Flour Mills and Heavy Structures

This Flour Mill and Grain Elevator recently constructed for the St. Lawrence Flour Mills Co., Ltd., at Montreal, Quebec, Canada

Write for Designs and Estimates

OFFICES

Minneapolis, Minnesota

Duluth, Minnesota

Fort William, Ontario

G. H. BIRCHARD
Contractor of
Grain Elevators
Especially Designed for Economy of
Operation and Maintenance.
LINCOLN, NEB.

ROBINSON TELEGRAPHIC CIPHER

Revised Edition

Cloth Binding - - - \$1.50
Leather Binding - - - \$2.00

Mitchell Brothers Publishing Co. 431 S. Dearborn St., Chicago.

L. H. HODGMAN
DWIGHT, ILL.

Designers and Builders of Elevators and Mills
Write for Plans and Estimates.

(We designed and built the Angola (Ind.) Elevator illustrated on page 557 of the April "American Elevator and Grain Trade".)

Elevator Machinery and Supplies

FLOUR AND FEED MILL MACHINERY
STEAM AND GAS ENGINES

Pulleys, Shafting, General Power Transmission Machinery, Roll
Grinding and Corrugating

Largest Factory and Stock in Western Country

SEND FOR 450-PAGE CATALOG

GREAT WESTERN MFG. CO.

General Office and Factory
LEAVENWORTH, KAN.

Warehouse and Salesrooms
1221-1223 Union Ave.
KANSAS CITY, MO.

Plain Gas Engine Sense

By E. L. OSBORNE

A BOOK for the man who has a gas or
gasoline engine and wants to operate
it to the best advantage.

The book is written in plain language and
thoroughly covers the field of gas engine operation.

125 Pages of Practical Suggestions.

PRICE 50 CENTS

MITCHELL BROTHERS PUBLISHING CO

431 S. Dearborn St., Chicago, Ill.



The Difference

in the

Construction of its "Inwards"
Eliminates Three-quarters
of the Internal Friction.

THAT SAVES POWER

The New "1905"
Cyclone
Dust Collector

INVESTIGATE

Write for Our

Dust Collector Catalog

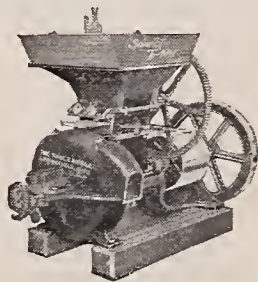
The Knickerbocker Co.
Jackson, Michigan

KENNEDY CAR LINERS

are the modern,
sure and cheap
way of avoiding
losses and troubles
occasioned
by leakage in
transit. Made by

FRED W. KENNEDY
SHELBYVILLE, IND.

Scientific Feed Mills



Custom feed grinding is most profitable when
a Scientific mill is used—that's why there are
more Scientific mills in use than any other
kind. They bring custom to your mill because
they grind a uniform product of any degree of
fineness, and do it quickly.

We Build the Greatest Variety of
Feed Mills. Write for Catalog No. 429
The Bauer Bros. Co., Springfield, O.

Golden Grain in Your Bins
Golden Dollars in Your Bank
Both are most successfully attained through the
**HALL-SPECIAL
ELEVATOR LEG**
and the
HALL SIGNALING DISTRIBUTOR



HALL DISTRIBUTOR CO.
506 Ramge Bldg., OMAHA, NEBR.

Reliance Construction Company

Furnish Plans, Estimates and Build
COUNTRY GRAIN ELEVATORS

Our long experience as a builder of elevators insures you an
up-to-date house. Write today.

625 Board of Trade Building,

INDIANAPOLIS, IND.

Did It Ever Occur to You

That the best way to get what you want, and get it promptly, is to
send your orders to people who have had experience in the business
and who carry a stock of goods always ready for quick
shipment? We have been in the Elevator and Mill Furnishing
business over twenty-five years and feel that we know something
about it. We carry in stock a complete line of supplies, including
Testing Sieves, Transmission Rope, Belting, Steel Split Pulleys in
sizes up to 54-inch, Elevator Buckets, Conveyor Chain Belting,
Sprockets, Lace Leather, Scoops, Shafting, Collars, Bearings, etc., etc.
Send us your orders. We will satisfy you.

THE

STRONG-SCOTT MANUFACTURING CO.
MINNEAPOLIS, MINN.

Northwestern Agents for The Great Western Mfg. Co., Richardson Automatic
Scales, Inviolable Cleaners, Knickerbocker Dust Collectors

Walls, Bins and Grain Elevators

By MILO S. KETCHUM

Second Edition. 556 pp., \$4.00.

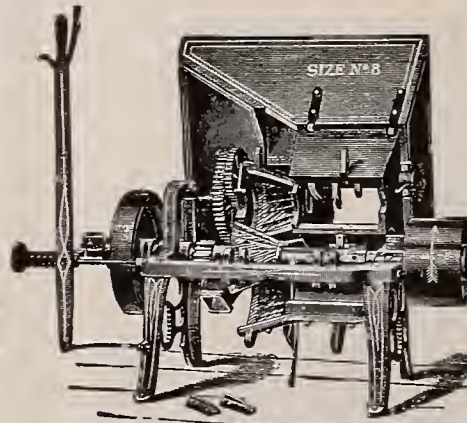
Design and construction are covered completely in this book.
The new edition brings it up to the minute with fresh data, new cuts,
and a modern treatment throughout. Over 150 pages were added to
the old edition. The new chapters on "Reinforced Concrete" and
"Methods of Construction and Cost of Retaining Walls" are especially
valuable. It is the standard work on stresses due to granular
materials.

Mitchell Bros. Publishing Co.,

431 So. Dearborn Street, Chicago, Ill.

Bowsher's All-Around Feed Mill

(Sold with or without sacking
elevator)



It CRUSHES ear corn (with or without
shucks) and GRINDS all kinds small grain
and KAFFIR IN THE HEAD. Has
CONICAL shaped GRINDERS,
DIFFERENT FROM ALL OTHERS.
RUNS LIGHT. Can run EMPTY
WITHOUT INJURY. Ahead of rolls or
stones in speed and quality of work.

YOU NEED a mill now. Quit THINKING
about it. COMMENCE to investigate.
Give US a chance and we'll tell you WHY
we think ours is the best.

SEVEN SIZES: 2 to 25 H. P.

Circular sent for the asking.

Drive pulley overhung. Belt to it from any
direction. Makes complete independent outfit.

THE N. P. BOWSHER CO., South Bend., Ind

The BOOK of CORN

SHOULD BE ON THE DESK OF EVERY
ELEVATOR MAN WHO HANDLES CORN

It is the only work that covers the field from the growing to the final
disposition of the cereal. An exhaustive treatise on corn
growing, breeding, marketing, etc.

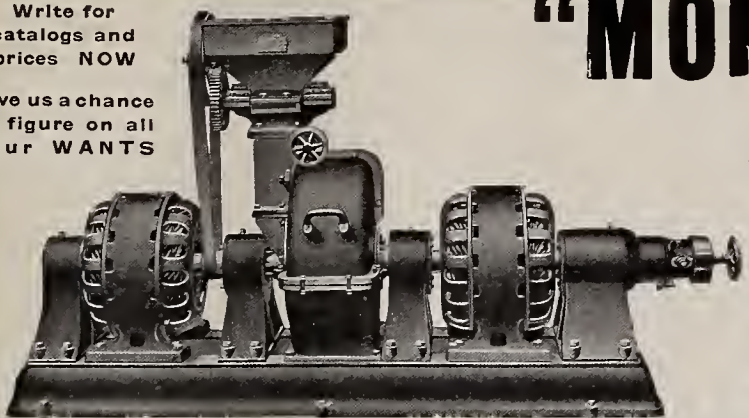
The book has been prepared by specialists, under the direction of Herbert
Myrick, and covers all features of the corn business. It tells not only how corn
should be treated by the farmer as producer in every step of the program of
corn culture, but also how to market corn and what ultimately becomes of it—
on the farm, as feed; or in the world's markets as the raw material of vast
manufacturing industries.

Price, \$1.50 per copy

For sale by MITCHELL BROTHERS PUBLISHING CO.
431 S. DEARBORN STREET CHICAGO, ILLINOIS

Write for
catalogs and
prices NOW

Give us a chance
to figure on all
your WANTS



MONARCH BALL BEARING, DIRECT
MOTOR DRIVEN ATTRITION MILL

We manufacture the Largest, Most
Improved, and Most Complete Line of
Machinery for Flour and Feed Mills,
Grain Elevators, etc., in the World.

"MONARCH" BALL BEARING

FEED GRINDERS WILL ALWAYS

→ SOLVE ALL YOUR TROUBLES ←

A SAVING of 35% to 55% in POWER

DON'T FORGET

DIRECT CONNECTED ELECTRICALLY MOTOR DRIVEN

Ball Bearing Feed Grinders and
Corn Crackers OUR SPECIALTY

You cannot afford to operate your plant without one of these "Monarch" Mills, because of the large amount of power saved, or the tremendous increase in capacity, that you will obtain with your present power, Guaranteed never to get out of TRAM. TRY ONE OF THESE MILLS NOW, if you want Increased Profits.

SPROUT, WALDRON & CO., THE MILL BUILDERS P. O. BOX 320 **Muncy, Pa.**

WESTERN OFFICE: MONADNOCK BLOCK (402) CHICAGO, ILL.

Branch Office { 613 McKay Bldg.
Portland, Ore.

FUMIGATION METHODS

BY W. G. JOHNSON

Contains full directions for Fumigating Mills and Elevators

313 Pages

Price \$1

Mitchell Brothers Publishing Co.

431 S. Dearborn St.

Chicago.



Fred Friedline & Company

DESIGNERS AND BUILDERS

Transfer, Terminal and Country Elevators,
Warehouses, Tankage in Frame, Iron-Clad
or Fire-Proof Construction, Concrete Tanks

Plans and Specifications a Specialty.
Write for Sketches and Estimates.

315 S. La Salle Street CHICAGO.

Millers' National Insurance Co.

Room 1321, Insurance Exchange Building,
175 W. Jackson Boulevard.

CHICAGO - - ILL.

CHARTERED 1865

Insurance with a maximum of
security at a minimum of cost for
ELEVATORS, WAREHOUSES
and CONTENTS, on the Mutual
Plan.

Five-Year Policies or short term
policies on grain, if required.

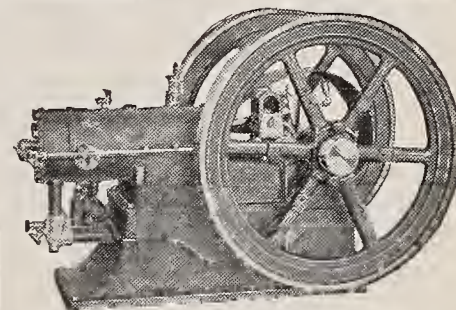
Semi-Annual Assessments cost-
ing about one-half Stock Company
Rates.

Gross Cash Assets.....\$1,703,365.33
Net Cash Surplus and Permanent
Fund.....\$1,013,587.24
Losses Paid Since Organization...\$7,673,329.60

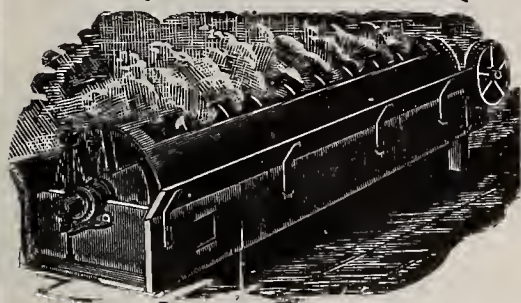
1879—LAUSON "FROST KING"—1912

Has High Grade Rotary Built-in Magneto and
no batteries to give you trouble or expense. En-
gine has hardened steel wearing parts. Gasoline
or Kerosene.

THE JOHN LAUSON MFG. CO.
59 Monroe Street New Holstein Wis



SEE THAT YOUR
CONTRACT CALLS FOR



THE
CUTLER
STEAM
DRYER

SOLD BY ALL MILL FURNISHERS

Not an Experiment. In successful use 30 years drying

CORN MEAL, HOMINY,

BREWERS' GRITS AND MEAL,

AND ALL CEREAL PRODUCTS.

ALSO SAND, COAL DUST, GRAPHITE, CLAY, ORES, ETC.

Automatic in operation, requiring no attention.

THE CUTLER CO., North Wilbraham, Mass.

CATALOG ON REQUEST

MILLERS' MUTUAL FIRE INSURANCE ASSOCIATION OF ILLINOIS

Established 1878. Alton, Illinois

Insurance on Flour Mills and Elevator Properties.

Grain Insurance for short terms a Specialty.

CASH ASSETS - \$376,783.32

G. A. McKINNEY, Sec'y

INSURE WITH THE Michigan Millers Mutual Fire Insurance Co. of LANSING, MICHIGAN

and get, without extra cost, the benefit of their Scientific In-
spections of your plant, embracing

Common Hazards

Mechanical Hazards

Electrical Hazards

Members of Mutual Fire Prevention Bureau

UNIVERSAL GRAIN CODE

(AND MILL FEED SUPPLEMENT)

Compiled for use of

GRAIN AND MILLING TRADES

of the United States and Canada

SEND FOR A COPY NOW. PRICE \$3.00.

Mitchell Brothers Publishing Co., 431 South Dearborn St., Chicago, Ill.

Leading Grain Receivers in all Markets

ATLANTA, GA.

Joseph Gregg & Son, grain and hay brokers.*†

BALTIMORE, MD.

England & Co., Chas., grain and hay receivers.*†
Hax & Co., G. A., grain and hay receivers.*†

BLOOMINGTON, ILL.

Baldwin Grain Co., brokers.
Hasenwinkle Grain Co., grain commission merchants
O'Neill & Gyles, grain brokers.
Slick & Co., L. E., grain receivers and shippers.

BUFFALO, N. Y.

Alder-Stofer Grain Co., grain commission.*
Buffalo Cereal Co., grain.*
Burns Grain Company, grain commission.
Churchill Grain & Seed Co., grain and seeds.*
Harold, A. W., grain merchant.

CHAMPAIGN, ILL.

Sledge, J. P., grain broker.*

CHICAGO, ILL.

Armour Grain Co., grain buyers.*
Bailey & Co., E. W., commission merchants.*
Butz Grain Co., E. G., grain commission.
Canby & Co., C. H., commission merchants.*
Carhart, Code, Harwood Co., grain commission.
Delaney, Frank J., grain commission.
Dickinson Co., Albert, seeds.
Dole & Co., J. H., commission merchants.*
Fraser Co., W. A., grain commission.*
Freeman & Co., Henry H., hay, straw and grain.†
Gerstenberg & Co., grain and seeds.*
Griffin & Company, J. P., grain commission.
Hooper Grain Co., receivers and shippers.*
Hulburd, Warren & Chandler, com. merchants.
Illinois Seed Co., seed merchants.
Kempner Company, Adolph, commission merchants.
Lamson Bros. & Co., commission merchants.*
McDermid & Co., commission merchants.
McKenna & Rodgers, commission merchants.*
Albert Miller & Co., hay and produce.†
Nye & Jenks Grain Co., commission merchants.*
Paynter, H. M., grain commission.
Pope & Eckhardt Co., grain and seeds.*
Rosenbaum Brothers, receivers and shippers.*†
Rumsey & Co., commission merchants.*
Sawers Grain Co., grain commission.*
Schiffin & Co., Philip H., commission merchants.*
Shaffer & Co., J. C., buyers and shippers.*
Somers, Jones & Co., commission merchants.*
Thayer & Co., C. H., grain and seeds.
Van Ness, Gardiner B., grain commission.*
Vehon & Co., M. L., commission merchants.
Wagner & Co., E. W., receivers and shippers.*
Ware & Leland, grain and seeds.*

CHICAGO, ILL.

Wilson & Co., B. S., grain, seed and provisions.*
Winans & Co., F. E., grain and field seeds.

COLUMBUS, OHIO.

McAlister, Jas. P., & Co., shippers grain and hay.

CRAWFORDSVILLE, IND.

Crabbs-Reynolds-Taylor Co., grain and seeds.*

CROWLEY, LA.

Lawrence Brothers Co., Ltd., grain, nitriline feed.

DES MOINES, IOWA.

Lockwood Grain Co., B. A., flour and grain dealers.*

DECATUR, ILL.

Baldwin & Co., H. I., grain brokers.*

DETROIT, MICH.

Dumont, Roberts & Co., receivers and shippers.*

FORT WAYNE, IND.

Bash & Co., S., grain and seeds.†
Egley-Doan Elevator Co., grain, seeds, hay.*†
Niezer & Co., grain, hay, straw, seeds, coal.*†

GREENVILLE, OHIO.

Grubbs Grain Co., E. A., buyers and shippers.*

HARRISBURG, PA.

Harrisburg Feed and Grain Co., grain and feed.

INDIANAPOLIS, IND.

Boyd, Bert A., grain commission.*
Witt, Frank A., grain commission.

JACKSONVILLE, FLA.

Wilson & Parker Co., commission merchants.*†

KANSAS CITY, MO.

Thresher-Fuller Grain Co., grain commission.*

LANCASTER, PA.

Eby & Son, Jonas F., receivers and shippers.

LIMA, OHIO.

Ward Grain Co., dealers and brokers.*

LOUISVILLE, KY.

Callahan & Sons, receivers and shippers.*
Thomson & Co., W. A., receivers and shippers.

MILWAUKEE, WIS.

Bacon Co., E. P., grain commission merchants.*
Bell & Co., W. M., commission merchants.*
Donahue-Stratton Co., buyers and shippers.*
Fagg & Taylor, shippers.*
Franke Grain Co., receivers and shippers.
Mereness & Potter Co., grain and seeds.*
Mohr-Holstein Commission Co., grain commission.

MINNEAPOLIS, MINN.

McCaull-Dinsmore Co., commission merchants.*
Minneapolis Seed Co., seeds.

NASHVILLE, TENN.

Hale & Sons, J. R., grain, seeds.*

NEW CASTLE, PA.

Hamilton, C. T., hay, straw, grain, millfeed, produce.

NEW ORLEANS, LA.

Leonhardt & Co., A. F., grain and hay.*†

NEW YORK, N. Y.

American Hay Company, hay.†
Brooklyn Hay & Grain Co., hay, straw and grain.†
Forbell & Co., L. W., commission merchants.*†

NORFOLK, VA.

Cofer & Co., Inc., J. H., grain.*
Cofer, Vernon L., hay, grain, feed.*
LeGrand & Burton, grain and hay brokers.
Reed & Bro., Inc., D. P., hay, grain, mill feeds.*

OMAHA, NEB.

Cavers Elevator Co., receivers and shippers.*

PEORIA, ILL.

Buckley, Pursley & Co., commission merchants.*
Dewey & Sons, W. W., grain commission.
Feltman, C. H., grain commission.
Grier & Co., T. A., grain commission.
Miles, P. B. & C. C., grain commission.*
Mueller Grain Co., receivers and shippers.
Rumsey, Moore & Co., grain commission.*
Tyng, Hall & Co., grain commission.*
Warren Commission Co., commission merchants.

PHILADELPHIA, PA.

Delp Grain Co., E. E., grain and feeds.*†
Lemont & Son, E. K., hay, grain, mill feeds.*
Miller & Sons, L. F., receivers and shippers.*†
Richardson Bros., grain, flour, mill feeds.*†

PITTSBURG, PA.

Hardman & Heck, hay, grain and feed.
Heck & Co., W. F., receivers and shippers.†
McCaffrey's Sons Co., Daniel, grain and hay.*†
McCague, R. S., grain and hay.*
Morgan, H. G., hay and grain.†
Stewart & Geidel, D. G., grain, hay and feed.†

RICHMOND, VA.

Adams Grain & Provision Co., receivers shippers, exporters.*
Beveridge & Co., S. T., grain, hay, feed, seeds.*
Richardson, Jr., Co., Inc., W. F., grain and feeds.*

SAGINAW, MICH.

The Henry W. Carr Co., receivers and shippers.*

SALT LAKE CITY, UTAH.

Smurthwaite Grain & Milling Co., C. A., grain, flour, hay, seeds.

ST. LOUIS, MO.

Elmore-Schultz Grain Co., receivers and shippers.
Mullally Commission Co., John, com. merchants.*†
Picker & Beardsley Com. Co., grain, hay and seeds.*†
Prunty, Chas. E., grain and seeds.

TOLEDO, OHIO.

Devore & Co., H. W., grain dealers.
The Goemann Grain Company, grain merchants.*†
King & Co., C. A., grain and seeds.*†
Paddock-Hodge Co., receivers and shippers.*
Raddatz & Co., H. D., grain and seeds.
Southworth & Co., grain and seeds.*†
Wickenhiser & Co., John, grain dealers.
Zahm & Co., J. F., grain and seeds.*†

*Members Grain Dealers' National Association.

†Members National Hay Association.

UNIVERSAL GRAIN CODE

(and Mill Feed Supplement)

COMPILED FOR USE OF

GRAIN and MILLING TRADES

OF THE

United States and Canada

This Code meets the present day requirements of the grain and milling trades—is up-to-date in every respect and thoroughly covers the changes in methods and business that have come into use of late years.

The translation expressions and tabulated matter is a great improvement upon any public grain and milling code now in use, and is an assured factor in saving tele-

graph tolls and misunderstandings in telegraphing.

The Universal Grain Code is being used by many hundreds of the most active firms in the country.

A list of Code Users is sent gratis with every copy of the Universal Grain Code, the names and addresses being published free of charge.

Send for a Copy Now. Price \$3.00.

MITCHELL BROTHERS PUBLISHING CO.

431 S. Dearborn Street

CHICAGO, ILL.

Progressive Grain Men

Are interested in all phases of the grain business, the milling as well as the marketing of grain. They aim to keep in touch with the consuming trade and know what becomes of their grain in the markets of the world. Such men find the

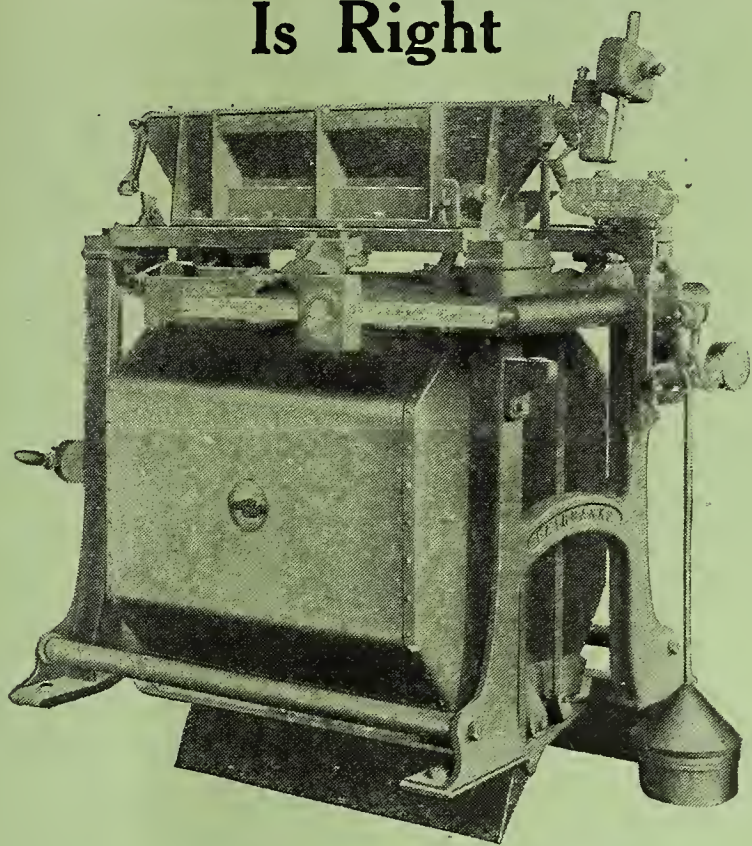
AMERICAN MILLER

a big help because it fully covers the business of milling wheat and other cereals.

Published on the first of each month, it gives all the news of the milling world and prints a large amount of technical matter that is of interest to the elevator man as well as the miller.

We will send the American Elevator and Grain Trade and American Miller to one address for one year at the combination price of \$2.50. Send in your subscription now.

Fairbanks Automatic Scale Is Right



Ask Us About It

You buy your grain over a Fairbanks Scale.
Why not sell over a Fairbanks?

Write for Catalog No. 544VO

Fairbanks, Morse & Co.

Wabash Avenue and Eldredge Place,

Chicago, Ill.

NOT A BILL OF EXPENSE BUT A SOURCE OF REVENUE

Enables
Shippers
to
Collect
Claims
—
Requires
No
Repairs
—
Occupies
Small
Space
—
Most
Economical
to
Install



No Bother
to
Operate
—
Never
Gets Out
of
Order
—
Will Not
Rust
or
Wear Out
—
60 Days'
Trial

PORTABLE BAGGER

Write for Catalog.

National Automatic Scale Co.

Bloomington, Illinois

Merchants and Manufacturers

who contemplate establishing plants
in the West and Northwest should
take advantage of a location on the

**Chicago and
North Western
Railway**

which reaches the famous Water
Powers, Coal Fields, Iron Ore Ranges,
Hard and Soft Timber Districts of the
West and Northwest, and affords the
best means of transportation to the
markets of the world.



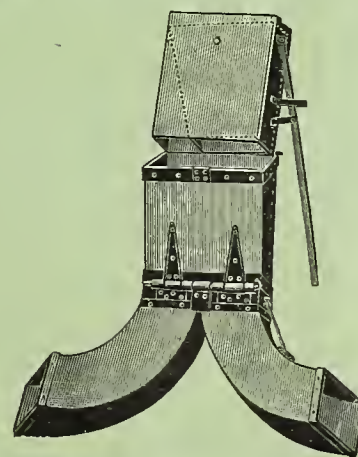
The Pioneer Line West and
Northwest of Chicago

For further particulars
apply to

George Bonnell, Industrial Agent
Chicago, Ill.

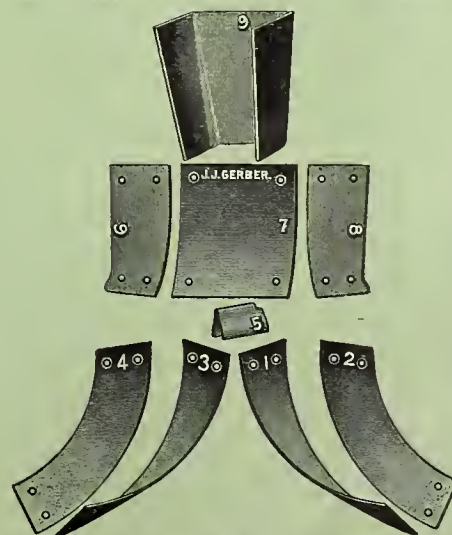
NW2011

THE GERBER BIFURCATED GRAIN SPOUT



The only Spout made for trimming cars that will load both ends at the same time.
It is made very heavy and has cast linings.

Cast Linings for Bifurcated Grain Spout



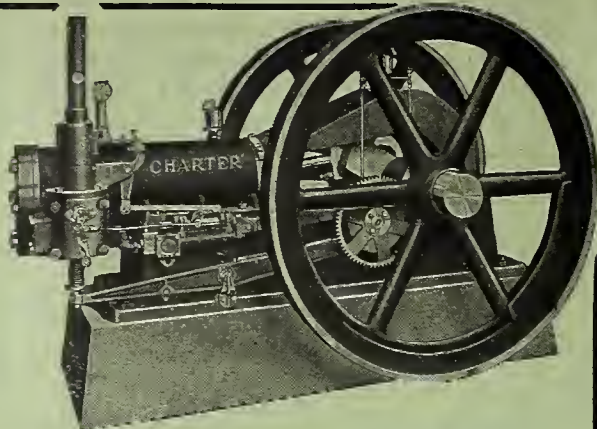
When ordering cast linings give number of parts required.

For particulars write

J. J. GERBER - MINNEAPOLIS, MINN

ORIGINAL GASOLINE ENGINE OF THE WORLD

100 H. P. and smaller
—for all kinds of work.
Gasoline, Kerosene,
Naphtha, Distillate,
Fuel Oil, Gas.



Twenty Years in Mill; \$11.00 Paid for Repairs

CHARTER GAS ENGINE CO.,
Sterling, Ill.

West Saticoy, Calif., August 26, 1912.

GENTLEMEN:—In March, 1892, I started my 25 horse power CHARTER and the same has been in operation every month of every year since then driving machinery consisting of 1 two pair high, 9x18 Roller Mill; 1 single 9x18 Roller Mill; 1 Coro Sheller and Cleaver; 1 Wheat Scourer, Polisher and Separator; 1 Bolting Reel; 1 Corn and Barley Cleaner; 1 Conveyor; 4 stands of Elevators; 1 pump and two lines of shafting.

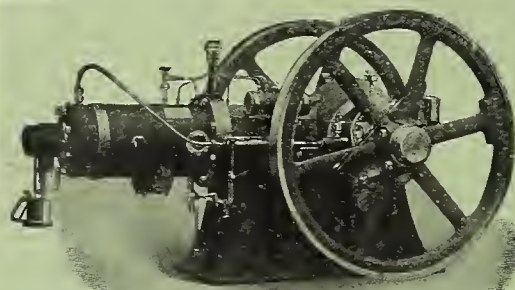
The same set of rings that came with the engine are still on the piston and are still serviceable. Every spring that came on the engine is still in use thereon, and the same valves and valve seats are still in use. No part of the governor, injector or cylinder roller has ever been replaced. The original brasses, both wrist and crank, are still in use, and the crank brasses are almost as tight as when received over twenty years ago.

In fact, the only repair of any consequence was a pair of gears, costing about \$11.00 to replace the ones from which we, in some way, broke a few teeth. The engine was, at the time of purchase, guaranteed on 74° gasoline, distillate or then being used on gasoline engines. But we have been using engine distillate successfully for years without altering the engine; and by heating have used low grade distillate. I wonder how many engines of other makes there are that, having run and given satisfactory service for a generation, are still on the bolts and ready for work. Wishing you success, I am Yours respectfully. JOHN H. LYNCH.

Send for Catalog and State Your Power Needs

400 Locust
Street

**CHARTER GAS ENGINE CO. STERLING
ILLINOIS.**



It Costs 5c an Hour

to operate a 25 H. P. Muncie Oil Engine, other sizes in proportion.

Uses Crude Oil, Fuel Oil, Gas Oil, Solar Oil, Kerosene or Distillate.

But two mechanically operated attachments. Powerful, Simple, Automatic and Durable. Write us.

MUNCIE GAS ENGINE & SUPPLY CO.

Liberty Street

MUNCIE, IND

Buffalo's Finest and Fastest Elevator



The Wheeler House

*Famous for its Speed
and Economy of
Operation*

**Fireproof Construction—All Steel
and Concrete**

**Equipped Throughout with Webster Power
Transmission and Grain Handling Machinery**

Highest Type of Construction--Very Best in Equipment

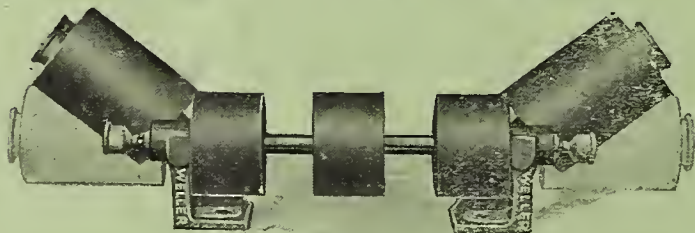
Complete description of the house in "Webster Method" for March. Send for a copy.

**The Webster M'f'g Company
TIFFIN, O.**

New York: 88-90 Reade St. - - - Chicago: 815-817 Fisher Bldg.

WELLER-MADE

All Styles of Belt Conveyors



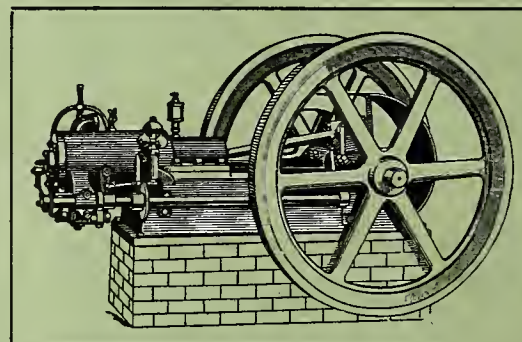
Those contemplating the installation of a Belt Conveying System will find it profitable to investigate the WELLER line. Weller Belt Conveyors possess a combination of thoroughness in design and construction that makes them particularly desirable for service in Elevators and Mills. Furnished in a wide variety of styles and sizes at reasonably low prices.

Write for complete information on Belt Conveyors, also on Spiral Conveyors, Car Loaders, Wagon Dumps, or anything connected with Elevating and Conveying Equipment.

Catalog No. 20 sent upon request

WELLER MFG. CO.
CHICAGO

The Lambert Gasoline Engine



Operated without the use of Battery

**STATIONARY and
PORTABLE**

Thousands in Use

**Thoroughly well Built
and Fully Guaranteed.**

Write for Catalog and Prices

THE LAMBERT GAS & GASOLINE ENGINE CO.

Anderson, (East Side)

INDIANA



No More Dust

if your elevator is
equipped with the

Day Dust Collector

Storm Proof—Spark Proof

In use in all best elevators.

Write

THE DAY COMPANY

38 So. 12th Street
MINNEAPOLIS, MINN.